Amateur Radio





1/_



"HAM" RADIO SUPPLIERS

5A MELVILLE STREET, HAWTHORN, VICTORIA

North Balwyn Tram Passes Corner, near Vogue Theatre. Phone: WA 6465 Money Orders and Postal Notes payable North Hawthorn P.O. Packing Charge on all goods over 10 lbs. in weight, 5/- extra

COMMAND TRANSMITTER See Page 2 for Conversion Details

We can supply the following:-

COMPLETE WITH VALVES & XTAL

4-5.3 Mc. £6/10/0

5.3-7 Mc. £6/10/0 7 - 9 Mc. £7/10/0

LESS VALVES AND XTAL

4-5.3 M^c. £4/0/0 5.3-7 Mc. £4/0/0

 $7 = 9 \text{ M}^{\text{c.}} \text{ £5/0/0}$

AT5 Transmitters, covers low freq. bands, also bandswitched 3 bands 2-20 Mc. using 6V6 M.O./xtal osc., 807 buffer/doubler, pair 807s in parallel; 6V6 grid modulator. All stages metered with 0-5 Ma, meter (250 Ma. F.S.D.); complete with all valves, gift at £9. AT5-AR8 Junction Box and Cables, £2/10/-. AR8 Cables

AT5-AR8 Aerial Coupling Units, contain one 0-5 Ma. meter ext, thermo couple, single gang variable condenser, keying relay, aerial change-over d.p.d.t. 12v. 48 ohm relay, etc. Ideal for wrecking ...

Audio Filter FL8A, peaked at 1,000 c.p.s. Contained in metal case with input and output phone plugs. Ideal for c.w. reception. A 25/- each Gift at ..

Aust. Wavemeter Type AWB1, high freq. 145 to 165 Mc. approx. Valve line up: 958 diode connected into two type 1N5 valves cascade connected d.c. amp. Complete with spare set of valves and 3" 0-1 Ma, meter. Circuit enclosed. Contained in flat grey metal carrying case. Packed ready for rail, £6/5/-Bendix RA1B Power Supplies, 240 volt AC

24v. at 1 amp. output 250v. HT. £5 each. American I.F.F. Units, complete with Valves, less Genemotor Supply, new, SCR522, 24v. input, 150v. and 300v. output at 300 Ma. Includes relay, voltage regulator, etc. A gift at 35/- Too heavy for postage.

2.5v. Filament Transformers 4v. Filament Transformers

NEW VALVES 6887 12/6 12K8 100TH 45/-829B 834, R.C.A. ... £1 884 Gas Triode 25/-

954 American 10/-955 American 957 Acorn Triode, Filament: 1.25v. at 50 Ma., plate current 2 Ma. Ideal for portable equipment .. 10/-

TESTED VALVES EX

DISPOSALS GEAR 6117 10/-1A5 10/-EVE 10/-1K5 7/6 7A6 10/-1K7 7A8 10/-1L4 10/-10/-185 10/-10/-10/-9¥9 10/-7G7 10/-2A4 10/-7N7 10/-305 10/-7W7 10/-6A3 10/-10/-10/-12A6 10/-15/-12AH7 10/-15/-12C8 10/-12/6 12.J5 10/-7/6 12SG7 10/-12SK7 10/-10/-10/-12SR7 10/-10/-50/-60/-5/-815 50/-832 50/-15/-20/-10/-10/-1625 15/-10/-1626 10/-10/-1629 10/-

6AC7 SAG5 6RE6 6C4 6C6 6C8 6F5 6H6 6J5GT 10/-6.16 6K6 6K7G .. 7/6 6L7 6N7 ... 2051 10/-6N8 15/-7193 5/-6R7 10/-9002 10/-6SA7 ... 10/-5/-9003 10/-6SH7

6SH7GT 4/-

6SN7 .. 10/-

6SJ7 ... 10/-EF50 7/6

68K7 ... 10/-OA4 10/-

6ST.7 15/- 9004 10/-

VR150 15/-

VR65A 2/6 BC733D Crystal Locked Receiver. Tuning range 108 to 120 Mc. I.F. freq. 6.9 Mc. Valve line up: three 717A, two 12SG7, one 12SH7, two 12SR7, one 12SQ7, one 12A6. Also contains six miniature relays. Packed ready for rail. One Price £7/10/- each

AR8 Receivers, 11 valves, 6 bands, continuous coverage 150 Kc.—25 Mc., B.F.O., audio controls, calibrated dials Command Receivers, 150—550 Kc., £9/10/-Command Receivers, 3 to 6 Mc., and 6 to 9 Mc.

less genemotor; air tested £7/10/522 Receivers, original cond. with valves, £9 AR301 High Freq. Receiver, uses three 954s, one 955, six 6AC7 LF, stages at 30 Mc, Easily converted to 144 Mc. Complete £6/10/-. English Beacon Receiver, two valves, contains

Trans., Resistors, Pots, Condensers, Ideal Receiver R.A.X., 7 valves, 4 bands: 200-300 Ke., 300-500 Kc., 500-900 Kc., 900-1500 Kc. I.F. freq. 160 Kc. Calibrated vernier dial, etc. Ideal Q5'er. Complete with 28 volt

genemotor £17/10/-Co-ax Connectors, Ampenol type, male and female 7/6 pair Co-ax Connectors, male/female, small Pi type, new Co-ax, indoor type, cotton covered 2/6 pair 1/- yd. Co-ax Cable, any length ... 2/- yd

LARGE STOCK OF CRYSTALS

100 Kc. R.C.A. Crystals

1,000 Kc. Crystal mounted in case with 10-pin

valve socket and 4-pin Continental power

Marker Crystals, 3.5 Mc., 5 Mc., and 10 Mc Crystals ground to any frequegncy. Price on request.

Following is a list of Crystal Frequencies available for immediate delivery, £2 each— 5170 Kc. 6000 Kc. 6200 Kc. 500 Kc. 775 Kc. 8176 923 Ke 7097 Kc. 8182.50 Kc. 1777.5 Ke. 7100 Kc. 8183.5 Kc. 2050 Kc. 2075 Kc. 7109 Kc. 8317.2 Kc.

7010 Kc. 7012 Kc. 7013 Kc. 7020 Kc. 7118 Kc. 8218 Ka 2716 Kc. 7121 Kc. 8320 Kc. 3482.5 Kc. 7125 Kc. 8488 Kc. 3503 Kc. 3509 Kc. 7021 Kc. 7126 Kc. 7022 Kc. 7130 Kc. 9125 Kc. 3511 Ke. 3512 Ke. 7023 Kc. 7134 Kc. 10 Me. 10.511 Me 7145 Kc. 7031 Kc. 3515 Kc. 7032 Kc. 7156 Kc. 10.524 Mc. 3516 Kc. 3528 Kc. 7032.6 Kc. 7163 Kc. 10.530 Mc. 7048 Kc. 7174 Kc. 10.536 Mc. 3532 Kc. 7052 Kc. 10.544 Mc. 7179 Kc 7202.3 Kc. 3539.3 Kc. 7062 Kc. 10.546 Mc. 3634 Kc. 3640 Kc. 7063 Kc. 8000 Kc. 10,563 Mc. 7064 Kc. 8017.5 Kc. 11 Mc. 8027 Kc. 7068 Kc. 12.803 Mc 3675 Kc. 7072 8028.5 Kc. 14.020 Mc. Ke 4285 Kc.

7089 Kc.

7090 Kc.

7093 Kc.

4600 Kc.

5000 Kc.

WANTED TO BUY—RADIO PARTS, VALVES, TRANSFORMERS, RECEIVERS, TRANSMITTERS, ETC.

8092 Kc. 14.105 Mc. 8155.71 Kc, 14.325 Mc.

8171.250 Kc.14.322 Mc.

Mc.

TANITARY __ _ 1955 Vol 23 No. 1

EDITOR:

T. D. HOGAN, VK3HX.

MANAGING EDITOR: J. G. MARSLAND, VK3NY,

TECHNICAL EDITOR: J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF: A. K. HEAD, VK3AKZ,

D. A. NORMAN, VK3UC. COMPILATION:

R. W. HIGGINBOTHAM, VK3RN. K. E. PINCOTT, VK3AFJ.

CIRCULATION:

I. K. SEWELL, VK3IK.

ADVERTISING REPRESENTATIVE: BEATRICE TOUZEAU, 96 Collins St., Melbourne, C.1. Telephone: MF 4505

PRINTERS. "RICHMOND CHRONICLE,"
Shakespeare St., Richmond, E.1.
Telephone: JB 2419.

MSS, and Magazine Correspondence

should be forwarded to the Editor, "Amateur Radio," C.O.R. House, 191 Queen Street, Melbourne, C.1, on or before the 8th of each month.

Subscription rate in Australia is 12/- per annum, in advance (post paid) and A15/- in all other countries. Wireless Institute of Australia (Victorian Division) Rooms' Phone Number is FJ 6997.

WI BROADCASTS

All Amateurs are urred to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts. VK2WI: Sundays, 1100 hours EST, 7146 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI. Intrastate working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultan-eously on 3573 and 7146 Kc., 51.016 and 146.25 Mc. Intrastate working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 6000 hours EST, simultan-eously on 3560 and 14342 Kc. 3560 Kc. channel is used from 6915 hours to 105 hours each Sunday for the W.I.A. Country hook-up. No frequency checks available. VK5WI: Sundays, 1000 hours SAST, on 7146 Ke. Frequency checks are given by VK5MD and VK5WI by arrangements on all bands to 50 Mc.

VK6WI: Sundays, 0930 hours WAST, on 7146 Kc. No frequency checks available.

VKTWI: Sundays, at 1000 hours EST, on 7146 Kc and 146.5 Mc. No frequency checks are available.

AMATEUR RADIO

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

Published by the Wireless Institute of Australia, C.O.R. House, 191 Queen Street. Melhourne C.1

EDITORIAL

N.Z.A.R.T. CALL SIGN BOOK, 1954

We have just received our copy of the New Zealand Association of Radio Transmitters' "Break-In" Call Book, 1954, issue, and wish to record our appreciation of this very fine effort by the Editorial Committee of the N.Z.A.R.T.

To many readers, this publication will be just another very useful aid to Amateurs in pursuit of overseas contacts, but to those who have shared the hard work of producing the Australian Call Book, such an effort is fully appreciated and merits our congratulations to those concerned

No doubt the Editorial Committee and other officers of the Association will confirm that the risks involved and the effort expended, was well worth while, if the Call Book proves of assistance to their fellow Amat-

In addition to a comprehensive list of N.Z. calls, covering the various districts of New Zealand, the book lists the names and addresses of non-transmitting members and also gives several useful operating hints. A list of DX C.C. countries is included and also a country prefix list, together with many interesting de-tails of contest awards-overseas awards etc.

Useful details of Standard Frequency Transmissions from WWV and also local Amateur Frequency Transmissions are given and also information is supplied on the working of the QSL Bureau, Amateur Fre-quency Allocations. Emergency quency Allocations, Emergency Corps, Official Broadcasts, Official Observer Station Service, and Branch Secretaries' names and ad-

The Wireless Institute of Australia has arranged to handle the sale and distribution of this Call Book and commends it to all Australian Amateurs as a valuable addition to their librarios

It seems pertinent to us that our readers should be reminded that here again we have another instance of what can be done by a live association of Amateurs, who have con-centrated their efforts through the N.Z.A.R.T. in the production of this splendid issue.

We believe that the Amateur in all countries is best served by the establishment of societies controlled by individual franchise, the fruits of whose efforts are generally seen in an improvement of Amateur Radio facilities and operating conditions such as we have outlined in this latest evidence of progress. FEDERAL EXECUTIVE

13

THE CONTENTS

Command Conversions for Five Woy Woy Field Day of the N.S.W. Div. W.I.A. Book Review Annual State Convention of the Vic. Div. W.I.A. Simple S Meter DX Countries of the World Fifty Megacycles and Above 10 Australian V.h.f. Records 10 Short Wave Listeners' Section 12 DX Activity by VK3AHH

Prediction Chart for January, '55 13 Federal, QSL, and Divisional Notes Obituary

FOR FIVE BANDS

BY J. K. HERD,* VK3JK

BY now we are all very familiar with those popular pieces of disbecase, equipment known as the BC450/SCR274W/ARCS series of transmitters and receivers. It is with the transmitters that this article will deal and it is to be hoped that someone who has had experience with the receivers will describe their alteration and uses later.

Of course a great deal has been written regarding the transmitter conversions in "CQ," "QST" and other American journals, but to cull and collate the relevant details is quite a job, even if they were all available for us to peruse.

Some of the following ideas were obtained from two "CQ" articles, one by Lt. Paul H. Lee, W4RXO (May, 1952) and the other by Herb. S. Brier, W9EGQ (February, 1954).

The main frequencies we wish to cover are 3.5, 7, 14, 21 and 28 Mc, and a separate transmitter for each of these bands can be acquired by modifying the 4 to 5.3 Mc. unit (BC457A). However for the 7 Mc., and higher frequencies, the 5.3 to 7 Mc., or preferably 7 to 9.1 Mc., entail less work.

80 METRES Firstly for 3.5 Mc. For this band use the BC 457A. It is desirable to rewire the filaments for 12 volt operation by putting them all in parallel. But, before we do so, it will be simpler if we take out all the unnecessary bits and pieces as our first job. Now for the screw driver and small side cutters!

and small side cutters!

Take off the top cover and bottom plate and attack the variable antenna supports and carefully put the inductor to one side. Then turn the unit over and examine the chassis interior care-needed will be that for pa plate pa serven, osc. plate and the filaments serven, osc. plate and the filaments small relay in the cathode circuit and the relay itself, as also the wires that of altering the filament wiring from the control of the control of altering the filament wiring from the control of the

Having dealt with the filaments and redundant wiring and earthed the 1625 cathodes, proceed to remove the shield can covering the osc. coil and padder condenser, topside. With the bristo spanner, release the grub screwen the spanner, release the grub screwen the and drill a 2" hole in the can so that this shaft can be operated by a screw driver to reset the oscillator frequency.

*4 Murdock Read, Wangeratta, Vic.

By increasing the capacity in this condenser, the oscillator will go down to about 3.2 Mc. without further ado. The station receiver can be used for the station receiver can be used for screws on the pa. padder condenser, so that it may be resonated with the oscillator frequency. The rotary link inside the pa. tank coil now has one to the antenna terminal, or alternatively to the antenna terminal, or alternatively a co-axial connector can be used instead, with a piece of co-ax running therefrom the rotary link. This is really pre-

If it is desired to replace the original 7-pin female plug on the back drop of the chassis with a 5-pin valve socket, the original plug is removed by using a sharp screwdriver to release the turned over edge on that plug so that hole to fit the new socket and connect the wiring to it as follows:—

Group the B minus, earth and one filament wire to one pin, and on the other four solder the other filament (unearthed), pa.h.t. plus, screen p.a. h.t. plus, and osc. h.t. plus. Having first temporarily replaced the oscillator shield can and set the padder, again remove the can and relock the grub screws on both this and p.a. padder unit. Replace the can and its screws, the bottom plate and upper cover; it is now ready to go on 3.5 Mc.

If one wishes to plug in a grid current meter or a key, use a phone jack or a pair of insulated pin jacks placed in front of the neutralising condenser on goes to the grid leak of the 1625s and the other is earthed. By using a 90 voit battery or a fixed bias supply, blocked grid keying is the ideal method for these grid keying is the ideal method for the for e.w. and 600 voits for phone, without danger of flashower in condensers.

40 METRES In this case preferably use the 7 to 9.1 Mc. unit or the 5.3 to 7 Mc., to save extra work other than the necessary removal of surplus pieces and wiring as defiliaments. The 5.3 to 7 Mc. unit needs only re-setting of the padders to bring it from 5.3 up to 7 Mc. as further treatment, but the 3 to 4 Mc. or 4 to 5.3 Mc. units need extra attention in either

One is to install a 12A6 in the crystal socket and a coil in the 1629 socket, either slug or condenser tuned, for

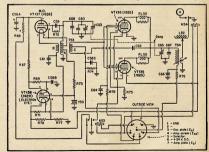


Fig. 1.—Circuit of the unmodified Command Unit. The following parts are identified:

Command Command Unit. The following parts are identified:

Command Command Command Unit. The following parts are identified:

Command Command Command Unit. Command Command Unit. Command Command

doubling purposes. In this event we remove the neutralising condenser on the side wall and place it in the junk box, for it was actually found unnecessary on any of the conversions-there being no sign of instability on any of the units. Remove the wire going to C58C and R74 from the base of the osc. coil and re-solder it to the pin, which was previously connected to the neutralising condenser. Remove wire going to the 1625 grids. From the pin on the osc. coil base to which it was connected, run a wire to the grid pin connected, run a wire to the grid pin on the 12A6 socket. Having rewired the latter tube as a doubler to 7 Mc., couple it to the 1625 grids through a 100 pF, mica condenser and run a 15,000 ohm one watt resistor to one side of the beforementioned key jack.

The other method-alteration of the osc. coil—is probably the easier. Remove the appropriate shield can and attack the osc. coil winding in this attack the osc. coil winding in this fashion. From the top of the coil remove turns from the heavy winding leaving 3\(^2\) above the cathode tap, and from the bottom of the winding remove sufficient turns to leave 68 below the

cathode tap.

A word of warning here! It will be noticed that winding B in the original circuit (see Fig. 1) is made with very fine s.c.e. wire, so be cautious in your labours below the cathode tap! If this wire is broken inside the coil former, untold trouble is caused and great patience is needed to replace it. I know, it happened to me. Cut this wire a full turn away from the hole through which it disappears, then remove sufficient it disappears, then remove sumcient turns to bring it level with the heavy winding (A in Fig. 1). Bare both cut ends very carefully and neatly splice and solder. The oscillator can be brought to 7 Mc. with the padder.

Turns are removed from the p.a. tank coil so that it resonates on 7 Mc. with its padder and variable condensers. Leave 8½ double spaced turns on coil.

If it is desired to still use the 1629 magic eye, replace the tap to R73 one turn up from the bottom of the osc.

coil winding.

15 METRES We have a wide choice for this frequency. The easiest is to use a 7 to 9.1 Mc. transmitter and proceed as we did for 3.5 When all this is done, turn the dial to 9.1 Mc. and, by re-setting the oscilla-tor to tune to 10.725 Mc., we can double in the final. In this case, cut the lead to the stator

of the p.a. geared variable condenser, remove the locking device from the p.a. padder, fit an extension shaft and knob to it, and remove turns from the p.a. coil leaving 44 double spaced turns and we are ready to go when a 50,000 ohm grid leak is substituted for the 15,000 ohm It is better to use a 12A6 doubler as described earlier and drive the p.a. as an amplifier on 21 Mc., using the as an ampliner on 21 Mc., using the 15,000 ohm grid leak in this case, pre-ceded by a 2.5 mH. r.f. choke. Again we may use any of the other units by attacking the osc. coil winding as before to enable us to bring it to 10.725 Mc. as its upper limit.

In the doubler plate tank a 50 pF. midget condenser tunes a close wound coil ½" in diameter of 20 gauge enamel wire, mounted on two pins of a cut down tube base. About 20 turns will resonate on 21 Mc.

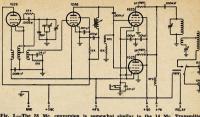


Fig. 2.-The 28 Mc. conversion is somewhat similar to the 14 Mc. Transmitter.

20 METRES Use any of the units by altering the osc. coil in the case of the 3 to 4 Mc. or 4 or 5.3 Mc. jobs and re-set the chosen one to cover the required spectrum on 7 Mc. Strip out all the wiring and small resistors associated with the crystal and 1629, and 20 ohm resistor in the oscillator plate lead. Now proceed to add a doubler as before, using a similar condenser and a 6-turn coil wound on a valve base. Disconnect the p.a. variable condenser and cut down the p.a. tank coil to 5½ double spaced turns. The rest of the modifications are as previously set out. This job will really delight you with its performance.

10 METRES

There is a good deal more to be done with this one. After proceeding as for previous units (14 Mc.) remove the surplus wires, etc., and rewiring the filaments in parallel, take out the variable tuning by the following procedure:

Remove the knob on the vernier tuning control, lock nut on the centre of the graduated dial, as also the frequency locking knob and the clamping device associated with this latter. Remove the p.a. padder condenser completely and take out the mounting screws holding geared variables. These condensers can now be juggled right out of the chassis.

We now proceed to remove plates from the condensers at this stage, but, once more, be careful of the method of The rotors move in ball bearings which are filled with small spheres of 1/16" diameter. Undue pressure or incautious application of the pliers will dislodge the rear end of the rotor and then the fun begins with the retrieving of these tiny bearings from the floor (if they have not already rolled into some place where they defy all attempts at discovery)—again I know, that's the reason of the warning.

Now remove all but six rotor and five

stator plates in the p.a. variable condenser. When this is done, unlock and remove the gear wheel engaging the worm drive on it from this condenser shaft and drill a ?" hole on the side of the chassis to accommodate a shaft and knob so that independent tuning with this condenser is possible.

only dealt with and here take out all but three moving plates. The associated padder above has four rotor plates re-moved before the shaft is unlocked. moved before the shall is uniocaeu.

Proceed now to operate on the osc. coil in a similar fashion to before, but this time leave only 1st turns above the cathode tap and four below it. Remove B winding turns (Fig. 1) until level with the heavy winding as before. It is pos-sible to put the oscillator now on 14 sible to put the oscillator now on 124 Mc. with comparable stability to that on 3.5 Mc. Instal a 12A6 doubler, as already set out, with a 50 pF. variable and about eight turns of 16 gauge tinned wire 1" diameter spaced to one inch Couple the plate of the 12A6 to the 1625 grids by a 30 pF. ceramicon, run a 2.5 mH. r.f. choke and 15,000 chm grid leak as before, but shunt the choke with a 20,000 ohm one watt resistor and from the junction of the r.f. choke and resistor connect a small 0.001 uF. mica resistor connect a small 0.001 ur. mica condenser to earth. Use two porcelain feed-through insulators to support the p.a. coll above the chassis, having dis-corded the original p.a. tank coll. The carded the original p.a. tank coil.

The oscillator variable has its rotor

In all cases a grid current of 5 Ma. is the optimum and, if necessary, cut it back when using a 12A6, by increasing the value of screen resistor of that tube. Oscillator plate voltage should pre-ferably be stabilised at 210 volts, under which condition the frequency is rock which condition the frequency is rock steady. The condenser tuning the doubler coil, when used, fits on the side wall of the chassis, below the 1629 magic eye socket between the back drop and the oscillator variable condenser

new coil consists of six turns of 12 gauge

bare copper wire 1" diameter spaced to

original condenser C66 to earth. Retrieve

the plate clips and parasitic chokes from the discarded p.a. tank condenser to connect the 1625 plates to the other end of the coil with these. Now the

oscillator can be set on 14 Mc, and the doubler tuned to 28 Mc.

of the coil and by-pass it with

6 METRES A much more involved operation was performed operation was personned for this conversion. The oscillator being placed on 16.670 Mc. and a 12A6 used as a tripler driving the 1625s as push pull amplifiers. The tripler is link connected by a co-axial line to an aperiodic

ZEPHYR MICROPHONES



"THE MICROPHONE THAT SPEAKS FOR ITSELF"

TYPE "80"

A high quality Moving
Coil Microphone of striking appearance and
fidelity.

• Ideal for transmission

- of voice or music.
- Good appearance.
- Solid cast case, finished in stoved black enamel, full tilting head.

TYPE "8XA"

A quality Crystal Insert with "Zephyrfil" filter.

- Durable chrome steel cage.
- Hand or stand pattern.
- Good high frequency response.
- Full tilting head.



TYPE "40"

A high grade Studio Microphone, reasonably priced, for those requiring high fidelity.

- Imported magnets, highly efficient generator.
- Fully protected against dust and filings.
- Rotatable cage—360°.
- Chrome copper cage, black bakelite base, and steel ginbles.

TYPE "90"

Precision built Moving Coil Generator provides good quality reproduction.

- Light weight, durable chrome and baked enamel metal case.
- Full tilting head.
- Excellent sensitivity.
- · Robust construction.

AUSTRALIAN MADE - - FOR AUSTRALIAN CONDITIONS

Manufactured by-

ZEPHYR PRODUCTS PTY. LTD.

58 HIGH STREET, GLEN IRIS, VIC.

Phone: BL 1300

AVAILABLE FROM ALL LEADING TRADE HOUSES

grid coil and adjusted for 6 Ma grid drive This ich works as for as triplor output is concerned on 6 metres but so far the na has not been finished. When it is completed and operating, it will be the subject of a senarate article

OPTIONAL CRYSTAL CONTROL ON SO OP 40 METPER

A plug-in adaptor (Fig. 3) is made which can be placed in the 1626 socket, and this tube is used then as the c.o. without disturbing the v.f.o. feature of the unit. V.f. control can be reverted to by removing the adaptor and re-Should we have been lucky enough to get the resonating crystals with our transmitters, we can use at least the holder and perhaps the crystal as well if it can be reground for 3.5 or 7 Mc.
With a hack saw carefully cut round
the sealing can just above the base of the crystal holder and remove the can

an octal base. This can be used again if it and its crystals are considered suitable when altered. The adaptor is constructed as shown The adaptor is constructed as shown in Fig. 3 from scrap aluminium. An octal plug, made from the base of an old metal tube, is fitted to the bottom of this unit and an octal socket placed so that the 1626, when inserted, lies over the space where the crystal and magic eye were situated (latter tube is used is removed for crystal operation). A suit-

able crystal socket is fixed to the adapt-

This will disclose an excellent holder on

or in a position where it will not interfere with outer top cover when latter is replaced.

is replaced.

If, when operating phone with the 80 and 40 metre units, frequency modulation is noticed or suspected, a buffer stage can be inserted in a fashion similar to a 12A6 doubler stage, except in this case a 2.5 mH. r.f. choke is used to replace the tuned circuit in the plate.

The buffer doubler in the other conver-

sions will prevent the oscillator from being affected in this manner Depending upon the input used in

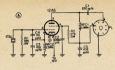
these transmitters, an appropriate mod-ulator can be employed for modulation of the plates and screens of the 1625s at 255 volts. It is suggested that the circuit shown

in Fig. 4 of the power supply be em-ployed. By this means extreme variations in screen voltage can be avoided when employing c.w. The use of a dropping resistor from the p.a. plate supply to feed the screens is not advocated for telegraphy.

ANTENNA COUPLER

The antenna coupler here uses some of the discarded pieces from the various units. The 80 metre coil from the 3 to 4 Mc. or 4 to 5.3 Mc. units to series tune the antenna has turns removed so that the optimum antenna current for a particular frequency on 80 metres obtained. A coil from the 5.3 to 7 Mc. or 7 to 9.1 Mc. units can be cut down and double spaced to parallel tune the coupler on 40 and 20 metres. For 15 and 10 metres air wound coils are used

The all-band antenna here consists of a 66 feet flat top, centre fed by an open wire line 42 feet long and a suitable coupler, using disposal gear, is used.
Band changing with the units de-scribed, and the above coupler, is merely



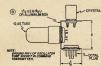


Fig 3 -This adaptor may be used with any Command transmitter by following any Command transmitter by following the instructions given in the text. A partial structural view is shown in "B" and a schematic (parts list below) is shown in "A."

Shown in "A."

C1—300 pF, 600v, ceramic,
C2—500 pF, 600v, ceramic,
C2—700v chm thv,
C2—70

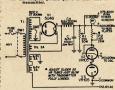


Fig. 4.-Parts list and wiring schematic of a power supply suitable for use with the Command set transmitters, Although the rectifier tube is slightly overloaded, no damage should result if the primary of the transformer is fused. The oscillator voltage must be regulated for v.f.o. operation.

T1.—Power transformer, 606-0-600v, 200 Ms., 5v. 3 amp., 63v. 3 amp., 65v. 3 amp., Ch.—S.5 h., 200 Ms. be filter condenses for the power supply is an oil filled, 1,000v. unit, with a capacity of 4 uF or more. How-ever, where consomy is important, two 8 or 16 uF. electrolytic condensers con-

8 or 16 uP. electrolytic condensers con nected in series may be used, with 100,00 ohm lw. resistors across each one t equalise the voltage drops. El—25,000 ohms, 50 watt, with silder. EWI—50,000 ohms, 55 watt, with silder. SWI—D.P.S.T. toggie.

a matter of seconds and we have 100 write available on five hands

At this station, return to the old order of transmitters, which were in a con-stant state of alteration, would not be contemplated under any consideration apart from the tidy and simple appear-ance of the set-up. It is really ideal for the man with limited space for his gear.

MIII.TI.BAND ANTENNA

In closing here is an idea for a four band antenna that is worth trying. Flat 300 ohm line, 46 feet 6 inches from one a fairly accurate match on all four bands without accurate impedance matching with an antenna counter

The following is a comment by Ed-mund H. Marriner, W6BLZ, from "CQ" of March, 1954.

of March, 1954.
"No graphs and no theory, but an antenna that works on 80, 40, 20 and antenna that works on 80, 40, 20 and 10 metres. I have often wondered why someone doesn't publish a handbook with antenna dimensions worked out. Most of the fellows want to nut up an antenna without plowing through a lot

"Here is an antenna worked out by W5LFM so that it can be fed on 80, 40, 20 and 10 metres with the 300 ohm point for the feeder at the same place for all bands. This lends itself to the

use of 300 ohm twin lead "On 80 metres, the half wave antenna good, as many readers are interested in 200-300 mile contacts. On 40, 20 and

10 metres the angle decreases and comes out about right for DX on each hand "This antenna is a version of the old single wire off-centre fed Hertz. It is fed with 300 ohm twin lead. The antenna must be cut to 137 feet 8 inches long. The antenna is fed at a point 46 teet to menes from one end. An insulator is inserted and the 300 ohm twin lead fastened and taped with electrical plastic tape. The antenna is made 137.7 feet specially so that it falls in the middle of the ten metre band at about 28.4 Mc.; which is the most critical band.

It is very broad tuning on all other "There are several ways to couple the antenna into the transmitter. If a parallel tank is used, adjustment can be made by simply moving the link in and out. If a 50 or 70 ohm low-pass filter is used, it will be necessary to add a set up to match to the 300 ohm line. "I have found that with this antenna there is less t.v.i. than when using endfed Zepps where there is a large cir-

culating current in the feeders.

"Near the ocean it is best to use No. 12 plastic house wire for the antenna. This solves antenna wire corrosion problems. The antenna will last much longer

than when using enameled covered wirec

"Do not use rope to support the antenna or you will wake up one morning and find the twin lead wrapped around the antenna due to shrinkage of the rope. A swivel does not help very much. A swivel does not help very much. It is best to use wire to support the antenna and bring the wire right up to the pulley. The supporting wires should be broken every several feet with egg insulators so as not to unbalance the antenna."

WOY WOY FIELD DAY OF THE N.S.W. DIV. W.I.A.

The value of these organised Field Days has been evident this year as possibly never before and this 1954 Field Day at Woy Woy attracted a large gathering of Amateurs, their wives and families, not forgetting the XYLs from Sydney and Newcastle for the main part; Arthur 2ZP, journeyed from In-verell, but it was found that the road traffic was not so severe as in previous years and all appeared to make fast times on the trip.

The following attended: 2ASW, 2HZ, 2VC, 2YA, 2ARF, 2LX, 2KR, 2AKR, 2ABV, 2OT, 2ZP, 2EL, 2AQO, 2XT, 2OQ, 2ASE, 2AWQ, 2ACD, 2EO, 2YC, 2CZ, 2FP, 2AAB, 2YB, 2AOJ, 2JX, 2AVK, 2AXZ, 2AOR, 2XY, 2AUH, 2FM, halgh, Harry Cunningham, Richard Re-tallick, Norm Moody, Mr. Bailey, Mr. James, Norm Burton, XYLs, YLs, and children, all making a very satisfactory

The morning session was devoted to general ragchew and registration, when all really got to know one another and many old friends met again in person and recalled the old times and possibly some of the old timers. Jim 2YC our President, made the Sunday morn-ing broadcast from 2KR, who incident-ally, has moved from his old location,

is now the other side of the back fence. Following lunch, the arrival of "Ad-iral Issacs" and his Petty Officer. Following itunen, the arrival of "Ad-miral Issaes" and his Petty Officer, 2ABO and Alf, together with Greg 2ANF and Ian 21I, was witnessed, the group having sailed by dead reckoning and rule of Thrum into the waterside wonderland, from Port Jackson. Their departure a half hour later was in humourous vein, and was a welcome visit to the Field Day. The weather had been quite poor, high winds and high seas, but their return trip was made without event.

.Children's events were organised by 2YB and 2AOJ, the 144 Mc. tx Hunt organised by 2EO, and others were run, and the ladies' competitions at the hall were well supervised by 2YC and 2ACI.
Raffles run during the day were handled
by Ruth, Mrs. 2YC, and Val, Mrs. 2EL, organised the pick-the-valves competi-

Following an afternoon full of activity afternoon tea was taken by most as sembled and various types of refreshment were obtainable, ice creams and drinks for the kiddies, tea for the ladies and a familiar brown fluid for the sterner sex

The thanks of the Council go out to those who so willingly assisted to make the day a success: Bill 2HZ, Registration Officer; Ces 2KR, John 2GA, and Major 2RU, for their local organisation par-ticularly; Mrs. Hardman, whose work in the kitchen is always a feature; Mrs. Corbin and Mrs. Bourke; Dave 2EO on

the Tx Hunt; 2AOJ and 2YB on the Sports; Rod 2ACU in the back room; 2ASW, 2AAB, assisting with the registration; and 2AWQ and 2EL on the lucky dip; 2AEZ for the tape.

The prizegiving was conducted by The prizegiving was conducted by the President, Jim 2YC, and the following were awarded to the fortunate recipients: Ladies' Lucky Number: ist, Mrs. Harvey (2ACD); 2nd, Mrs. Whiting (2ACD); 3rd, Mrs. Storer (2GR); 4th, Mrs. Bourke (2EL). Musical Quiz: ist, Mrs. Boyd (2AML); and, Miss Quinton (2AZN). Pushing the Penny: 1st, Mrs. Swain (2CS); 2nd, Mrs. Smith (2AEL). 144 Mc. Tx Hunt: The tx was located at Saratoga and was not found, but the at Saratoga and was not found, but the prize was awarded to ZAET and 2VU (Singleton). All Band Scramble: Harbold 2AHA. Guess the Valves: 1st, Ken 2KG; 2nd, Harold 2AHA. Morse Test: st, Jim 2ZC; 2nd, Ken 2KG. Gest: Lucky Number: 1st, 2DG; 2nd, 2AGO. Pick the Voices: 1st, Ted 2ACD; 2nd, Mrs. Hay (2AGW).

Further lucky numbers were drawn

Further lucky numbers were drawn and 60 members received prizes of valves, the President getting his num-ber drawn only to get a cracked valve. Special prizes were drawn and were won by 2XO, 2ASE, Mrs. 2YC, 2EL and

BOOK REVIEW

RADIO CALLS OF THE WORLD

Published by the N.Z. DX Radio Asso-ciation, 80 pages, Aust. price 4/9.

This is a list of 6,000 medium wave and 2,500 short wave broadcasting stations giving frequency, call sign, location and power. It is a handy little book to have around. On looking through it one finds that the short wave stations ex-tend from 2.33 Mc. to 26.08 Mc., that YVLG is on 3.512 Mc., EQO on 3.797 Mc., a lot of stations in the 40 metre band, none in the 20 and 15 metre bands. Did you know that KCHS on 1400 Kc. is located at Truth or Consequences, New Mexico? Fascinating!

One obvious omission is the long wave broadcasting band. For completeness, I feel sure space could be found in future editions for these 17 stations lying between 155 Kc. and 281 Kc.—A.K.H.

PHILIPS TECHNICAL REVIEW AND

PHILIPS COMMUNICATION NEWS These two journals contain much of interest to the technically minded Amateur. In them will be found descriptions of the latest advances in communications as developed in the Philips Laboratories. In the copies on hand are found articles on carrier telephone systhe international exchange of television programmes and the methods of changing from one set of standards to another, an instrument for measuring transmission times to 0.000,000,001 of a second, and the new photo flux flash

Subscriptions for these journals should be sent to Messrs. Philips Electrical In-dustries of Australia Pty. Ltd., Philips House, 69-73 Clarence St., Sydney.— A.K.H.

CALL SIGNS

It has been noted with concern that there has been a growing tendency during recent months for of Amateur Stations. particularly when engaged in telephony transmissions, to emit the station call signs.

Such practice is, of course, not in accordance with International requirements, and contravenes the Wireless Telegraphy Regulations nder which stations operate. Regulation 60 states that the licensee of an Amateur Station shall at all times transmit the full call sign allotted to the station concerned.

DY CC TIEMING

PHONE											
Call	N	o. Ctr.	Call	No.	Ctr.						
VK4HR	1	2 175	VK4RT	22	124						
VK3BZ		3 163	VK4WJ	17	122						
VK6RU		2 165	VK4DO	20	116						
VK4FJ	1			8	114						
VK3EE	1	0 163	VK5MS	24	109						
VK3JD		1 155	VK4CB	28	109						
VK4KS		9 152	VK3WM	29	109						
VK6KW		4 150	VK3HO	25	103						
VK3ATN			VK2ADT		102						
VK3LN	1	1 141	VK2AHA		102						
VK3AW1	W 1	4 140		19	101						
VK3JE		7 139	VK3IG	5	100						
VK4WF	1	6 137	VK3GG	18	100						
VK4RW	1		VK5LC	27	100						
VK6DD		6 125	VK3AUP	30	100						
c.w.											
					2000						
Call		o. Ctr.	Call	No.							
VK3BZ		6 214	VK5FH	31	134						
VK3KB	!	0 200	VK4RF	11	125						
VKAHR		8 193	VK3HT	37	124						

VK3EK VK3JI VK3PL VK3UM VK2OY VK7LJ VK4DA VK7LZ VK4RC VK9XK VK6KW 25 38 12 44 24 115 114 113 112 107 107 104 104 VK5RX VK6RU VK3CN VK2GW VK6SA VK5BO VK4QL VK4DO VK4DO 17 13 41 40 42 34 46 14 19 32 22 35 47

170 163 153 153 151 151 150 146 144 144 143 142 138 137 VK6KW VK3RJ VK2YC VK3PG VK3APA VK3NC VK2OA VK7RK VK2AEZ VKSVI OPEN Call VK5LC

116

VK3BZ VK2ACX 224 221 211 206 206 198 195 23 46 53 43 VK4HR VK4FJ VK6RU VK3JE VK2ASW VK3JA VK2ADT VK3HO 32 12 16 149 38 49 211 34 54 25 56 111 59 38 59 27 VK3HO VK3MM VK4RC VK3ZB VK9XK VK2ZC VK3KR VK4EL VK6KW VK2DI VK4DO VK4DO VK3KX VK4KS VK3AWW VK9GW VK4RW VK3LN VK3FL VK4WF VK3HT VK2YL VK9DB VK3AWN VK6WT VK2VN VK4UL 45 48 52 29 26 40 VK2HZ VK7KB 137 137 136 VK2TI VK3YS VK2ADE VK3JI 28 133 31 35 51 39

125

VK2AHA VK2AHA

ANNUAL STATE CONVENTION OF THE VIC. DIV. W.I.A.

Under ideal weather conditions, the Annual Convention of the Division was held at Ballarat on the week-end of November 27-28, 1954, Proceedings November 27-28, 1994. Proceedings opened with a general assembly at the shack of 3AMH, which is a brand new one and located on one of the highest points of Bailarat, being 1,700 feet above sea level. After all had received their accommodation, preparations were made for the Dinner and Convention, Approximately 80 members sat down to an excellent repast, but before all could do justice to the meal, the ladies and chil-dren retired to the main dining hall so as to make room for the "Old man." owing to the seating accommodation being overtaxed. The usual toasts were

honored and received.

The business side of the Convention got away to a good start, there being 25 items, which meant a long sitting. However, by good judgment on the part of the President, everything went along smoothly. The debates were well spoken and the outcome of the business will be for the good of members. The Kinnear Trophy for 1953-4 was won by the North East Zone and the President of the Division called on the President of the Zone to come forward to receive it, but unfortunately he could not be found, the result being that the trophy will be forwarded to the Secretary of the Zone in due course. At 11.15 pm. the Presi-dent closed the Convention, then the

ladies, having returned from the pic-tures, joined with the "O.M's." at supper. Members were most delighted to wel-come the President of the VK2 Division. Jim 2YC, accompanied by Vice-Presi-dent Charlie 2AWO, Hon, Secretary dent Charlie ZAWQ, Hon. Secretary Harry 2ACH, and Council member Vince 2VC. Other VK3 members and visitors were: Chas. Godden and Frank Utch-man, from Mildura; Graham and Mrs. Colley, from Traraigon; Keith Scott, Mafra; Neil Hamilton, from Coleraine; Jim Heard, from Wangaratta; Clyde Case, travelling from Birchip, unfor-tunately for him his car broke down at Stawell and he could not proceed to Ballarat. Some of the highlights were: Bob 3IC

Some of the highlights were: Bob 3IC came equipped with tx hunting gear on his motor bike; some wag named him received the second of the secon 3OF, owing to the fact that the six

metre band was not open After the demonstrations and talk, there should be many more converts to mobile equipment. It is understood that 3SX will be one of the first. The Fed-3SX will be one of the first. The Federal Secretary and the President of the VK2 Division had a very long session, evidentally talking Institute matters. Don 3ALQ and party had the misfortune to loose their 7 Mc. xtal, thus depriving them from taking part in the

In summing up, the Convention was an unqualified success, thereby proving the policy of running them in the country centres. Special praise goes to Bill Sadler and members of the South

Western Zone.
On Sunday, the social side of the Convention opened with all hands at the shack of 3AMH. More car loads of visitors arrived for the day's doings and count of cars revealed 35. A hidden a count of cars revealed so. A model to the hart started the day's activities, and after much turning of loops, those who were participants, moved off. Several members went on a tour of the S.E.C power station and the remainder went on a bus tour of the city. Unfortunately for the hunters, the tx "went on the blink" just after the start and another one had to be procured in a hurry,

however all went well.

After lunch, the assembly point was the Botanical Gardens, one of the show

places of Victoria. Here things really got going, numerous cars were equipped with l.f. and v.h.f. gear and the boys "went to town." A "contest" was held, with one station at a time, 10 minutes being allowed to make as many contacts as possible on any band. A treasure bunt for the children resulted in much hunt for the children resulted in much fun for them, and the guessing of a tuned circuit provided many weird answers. After the prizes were dis-tributed and the usual camera barrage had their go, the cars made their way home, with everybody having had a wonderful time.

It would be an idea if a "Get To-It would be an idea if a "Get To-gether" with other Divisions could be arranged at some suitable time and place, as it seems that a closer liaison could be a distinct advantage to all members of the W.I.A.



START THE **NEW YEAR RIGHT**

- * LET SAFETY FIRST BE YOUR MOTTO.
- * STAMP OUT THOSE CAMP FIRES.
- * OBSERVE CARE IN HANDLING HIGH TEN-SION.
- * DRIVE SAFELY
- * DON'T NEGLECT

XYL.

(Avoid the Dog House.)

GLORAD ENGINEERING SERVICES

291a TOORONGA RD., S.E.6 MALVERN, VICTORIA

Phone: BY 3774

Simple S Meter BY LES ELIASON.* VK3ALE

There are many and varied circuits for S meters and here is another to add to your receiver. There are two adjustments for correctly setting the needle deflection and zero set.

With this circuit it is possible, with the right equipment, to calibrate the scale in db to the input of the receiver. Maximum deflection is controlled by a 10,000 ohm wire wound potentiometer and zero set is controlled by a 3,000 ohm

potentiometer. Some experiment may be needed to get the right voltage balance across the

For c.w. reception the meter should

be isolated from the circuit by opening both leads to the meter The circuit values are the ones in use in a BC348 receiver. With suitable modification of values, this circuit can

be used with any type of receiver. * 72 Orr Street, Shepparton, Victoria.



Tap on to the B+ line just before the r.f. gain control. The 3,000 ohm poten-tiometer can be mounted next to the meter for the zero level may vary from band to band. The 10,000 ohm potentiometer can be mounted anywhere.

The negative side of the meter goes to the cathode of a tube controlled by

These values work on the writer's BC348. They may not on yours, so be careful as meters are easily damaged. When you have the meter working right, you will have an S meter that works like a charm and does not over swing on those local signals.

Amateur Radio, January, 1955

THE

SUBSCRIBE NOW TO YOUR FAVOURITE RADIO MAGAZINES

Subscriptions can be arranged to any of the following publications:

A1	MERICAN

QST	£2	9	6	RADIO & TELEVISION NEWS	£2	9	6	
cq	£1	18	0	AUDIO ENGINEERING	£2	7	0	
RADIO ELECTRONICS	£2	7	6					
			EN	GLISH				
SHORT WAVE MAGAZINE	£1	11	0	WIRELESS WORLD	£1	16	0	
WIRELESS ENGINEER	£3	0	0	PRACTICAL WIRELESS		17	6	
PRACTICAL TELEVISION		17	6					
		AI	JST	RALIAN				
RADIO & HOBBIES		18	0	AMATEUR RADIO		12	0	
RADIO & TELEVISION (N.Z.)	£1	7	6					

Place your order now for the coming year.

Subscription lists available on application.

INSPECT OUR LARGE RANGE OF RADIO AND TELEVISION TEXT BOOKS

McGILL'S Authorised Newsagency

183-185 ELIZABETH STREET, MELBOURNE, C.1, VICTORIA. "The Post Office is opposite" Phone: MV 1475.7



piniature POTENTIOMETERS n MORE THAN HALF of all radio and T.V. sets manufactured the U.K. Miniature in size-instrument quality at LOW PRICES!

- Overall diameter, 1-1/8 inch.
- Double pole type V switch operated from shaft. New steel rotor for shielding and steel shaft for accuracy.
- DOUBLE CLENCH TERMINALS climinate noisy joints. me track design for switch and non-switch type enables ter-changeability.
- The renowned MORGANITE RESISTOR TRACK, low noise, hard wearing, wide range of standard resistance values and gradings.
- Rating 14 watt is very conservative, allowing for trouble-free occasional overload.
- Stability of track under 3% resistance change after 800,000 cycles
- The type V switch can be relied upon to handle 2 amps. 246 volts or 12 amps. 12 volts D.C. for 30,000 operations. Switch pots incorporate a 2 amp. switch.

I. H. MAGRATH & CO. LTD. 208 Little Lonsdale Street, MELB. FB 3731

DX COUNTRIES OF THE WORLD

The list of Countries as hereunder, and as amended from time to time in Federal Notes, is the Official List to be used in connection with the issue of the Australian DX C.C. Award. The list below shows first the Country, the Zone number in parenthesis (as used by the "CQ" W.A.Z. Award) and the Amateur Prefix.

Aden & Socotra Is. (21) VS9 YA KL7 Afghanistan (21) Alaska (1) Albania (15) ZA Aldabra Islands (39) Algeria (33) FA Algeria (55) Andaman & Nicobar Is. VU5 (26) Andorra (14) PX, 7B4 Anglo-Egypt. Sudan (34) ST Angola (36) CR CR6

Antarctica (13, 29, 30) VK1, CE7, LU, VP8 Argentina (13) LU Ascension Island (36) Australia (inc. Tas.) (29, Austria (15) (MB9) OE Azores Islands (14)

Bahama Islands (8) Bahrein Island (21) MP4B Baker, Howeland & Am Phoenix Is. (31) Balearic Islands (14) EAG VP6 Barbados (8) Basutoland (38) Bechuanaland (38) ZS8 ZS9 Belgian Congo (36) ... OQ5 Belgium (14) Bermuda Islands (5)

Bhutan (22) Bolovia (10) Bonin & Volcano Is. (Iwo Jima) (27) Borneo, Brit. Nth. (28) ZC5 Borneo, Netherl'ds (28) PK5 Brazil (11) VS5 Brunei (28) Bulgaria (20) (9B3) Burma (26)

Cameroons, French (36) FE Canada (2, 3, 4, 5) VE, VO Canal Zone (7) Canary Islands (33) Cape Verde Is. (35) KZ5 EAS Caroline Islands (27) Cayman Islands (8) Celebes & Molucca Is (28) PK6 Ceylon (22) 4 Chagos Islands (39) 457

CE

TIS

OZ

Channel Islands (14) ZC3 FO7 Clipperton Is. (7) Cocos Island (7) Cocos Islands (29) VK1, Colombia (9) Comoro Islands (39) FRA Cook Islands (32) ZKI Corsica (15) Costa Rica (7)

Crete (20) Cuba (8) CM. CO Cyprus (20) ... (M. Czechoslovakia (15) (MD7) Denmark (14)

Dodecanese Is. (Rhodes) (20) Dominican Republic (8) HI Easter Island (12) CE0 Ecuador (10)

Egypt (34) (MD5) SU Eire (Irish Free State) EI England (14) Eritrea (37) . 16, ET2, MI3 Ethiopia (37) ET3

Faeroes, The (14) Falkland Islands (13) VP8 Falkland Islands (10) Fanning Is., Wash'ton Is., Christmas Is. (31) iii Islands (32) VR2 Finland (15) OH Formosa (24)

Fridtjof Nansen Land (Franz Josef Land) (40) ... Galapagos Is. (10) ...

Gambia (35) Germany (14, 15) DJ, DL, DM Gibraltar (14) ZB2 Gilbert, Ellice & Ocean (31) Goa (Portu. India) (22) CR8 Gold Coast (and British

Togoland) (35) . Greece (20) Greenland (40) ŏx Guadeloupe (8) Guantanamo Bay (8) KG4 Guatemala (7) Guiana, British (9) Guiana, French, and Inini (9) Guiana, Netherlands (Sur-

P7

HH

HA

TF

inam) (9) Guinea, Portugese (35) Guinea, Spanish (35) Haiti (8) Hawaiian Islands (31) Heard Island (39) VKI Honduras (7) Honduras, British (7) Hong Kong (24) Hungary (15) Iceland (40)

Ifni (33) EAS India (22) Iran (21) Iraq (21) (MD6) Ireland, Northern (14) Isle of Man (14) Israel (20) 4X4 Italy (15)

Jamaica (8) Jan Mayen Is. (40) LA, LB Japan (25) KA, JA Jarvis and Palmyra Is. (31) KDS Java (28) PK Johnston Island (31) ŔJ6

VQ4 FB8 Kenya (37) Kerguelon Is. (39) Korea (25) (VT1) MP4K Kuwait (21) VII4 Laccadive Is. (22) Lebanon (20) ... Leeward Is. (8) OD5, AR8 VP2 Liberia (35) EL Libva (34) 5A1, 5A2, 5A3, (MC1, MD1, MD2, MT2) Liechtenstein (14) Luxembourg (14) LX CR9 Macau (24) Macquarie Is. (30) VKI Madagascar (39) Madiera Is. (33) CS3, Malaya (28) Maldive Islands (22) Malta (15) ZBI Manchuria (24) C9 Marianas Is. (Guam) (27) KG6

Marion Is. (and Prince Edward Is.) (38) Marshall Islands (31) KX6 Martinique (8) Mauritius (39) VQ8 Mexico (6) Midway Island (31) F Miquelon and St. Pierre Is. (5)

Monaco (14) ... 3A1, 3A2 Mongolian Rep. (Outer) (23) Morocco, French (33) Morocco, Spanish (33) CN8 Mozambique (37)

Nepal (22) NEI, VU7 Netherlands (14) ... PA, PI Nether, West Indies (9) PJ New Caledonia (32) New Guinea, Nether (28) PK7, JZ

New Guinea, Territory of (28) New Hebrides (32) New Zealand (32) Nicaragua (7) ZL Nigeria (35, 36) Niue (32) Norfolk Island (32)

Norway (14) Nyasaland (37) LB ZD6 Oman, Suitaneve (21) Oman, Trucial (21) VS9, MP4H Pakistan (22) AP Palau (Pelew) Is. (27) KC6 ZC6, Palestine (20)

Panama (7) Papua Territory (28) VK9 Paraguay (11) OA Philippine Islands (27) DU Pitcairn Island (32) VR6 Poland (15) . Portugal (14)

Principe and Sao Thome Is. (36) Puerto Rico (8) KP4 MP4Q Qatar (21) Reunion Island (39) FR7

Rhodesia, North. (36) Rhodesia, South. (38) Rio de Oro (33) Rumania (20) Ryukyu Is. (Okin.) (25) KR6 Saarland (15)

St. Helena (36) St. Paul & New Amsterdam Is. (39) Salvador (7) Samoa, American (32) KS6 Samoa, Western (32) ZM

San Andres and Providenia Archipelego San Marino (15) Sarawak (28) Sardinia (15)

Saudi Arabia (Hebiaz & Nejd) (21) Scotland (14) Seychelles (39) Siam (26) Sierre Leone (35) Sikkim (22) Singapore (28) Solomon Is. (28) Solomon is (28) VR6 Somaliland, Brit. (37) VQ6 Somaliland, French (37) FL Somland, Ital. (37) MD4, 13 South Georgia (13) VP8 South Orkney Is. (13) VP8 South Sandwich Is. (13) VP8 South Shetland Is. (13) Southwest Africa (38) Soviet Union Europ. R.S.F.S.R. (15, 16, 17) UA1, 2, 3,

16, 17) UA1, 2, 3, 4, 6 Asiatic R.S.F.S.R. (17, 18, 19, 25) Ukraine (16) IIR Belorus'n S.S.R. (16) Azerbaijan (21) Georgia (21) LIER Armenia (21) UG6 Turkoman (17) Uzbek (17) UI8 Tadzhik UJ8 Kazakh (17) Kirghiz (17)

UNI

UO5

UR2

EA

ZS7

Karelo-Finnish Republic (16) Moldavia (16) Lithuania (15) Latvia (15) Estonia (15) Spain (14)

Sumatra (28) Svalbard (Spitzbergen) (40)Swan Island (7) Swaziland (38) Sweden (14) Switzerland (14) Syria (20)

Tanganyika Ter. (37) VQ3 Tangier Zone (33) EK, KT1, Tannu Tuva Rep. (23) .. UA0 Tibet (23) Timor Portugese (28) CR10 Togoland, French (35) FD Tokelau (Union) Is. (31) Tonga (Friend.) Is (32) VR5 Transjordan (20) ZC1, JY AG2, MF2 Trieste (15)

Trinidad & Tobaga (9) VP4
Tristan da Cunha and
Gough Is. (38) ZD9 Tunisia (33) Turkey (20) (FT) Turks & Caicos Is. (8) VP5 Uganda (37) VQ5 Union of S. Africa (38) ZS United States of Amer-ica (3, 4, 5) WN, K, Uruguay (13)

Vatican City State (15) HV Venezuela (9) YV Virgin Islands (8) KV4 Wake Island (31) Wales (14) Wallis Island (32) Windward Is. (8, 9) Wrangel Island (19) Yemen (21) Yugoslavia (15) YT, YU Zanzibar (37)

KW6

GW

FWS

FIFTY MEGACYCLES AND ABOVE

50 Mc. FROM MACQUARIE ISLAND

Macquarie Island boys will be taking six metre gear with them. Look for them on 50.94 Mc. Operation is expected to commence early in January.

NEW SOUTH WALES

NEW SOUTH WALES

The November meeting of the V.h.f. Group was again well attended. The lecture for the who at very wheat never perspective the property of the West Perspective of the West Perspective of the West Perspective of the Group was the West Perspective of the West Perspective of the West Perspective of the West Perspective of the West Perspective Order of

associated with this very essential component. The fature for November was 1, Midden IV. Addition of the control of the contro XX's shack where a gathering of 31 partook of an excellent supper (it was rumoured that hree days later, Ted was still washing up), and much discussion on the usual topics associated with v.h.f. activities including inspection of Ted's 50 ft. tower which we are very orry to report has since been blown down in

tion of Ted's 50 ft. tower which we are very very severe storms, teen book down, in the control of the control

where over three over three, speeds a full wave of the both and the full process of the state of

After some very stemp conditions, the working and and a live by the fluid ten of the state of th

Methodure and Addition to Image-yel frequency.

A. the V.M. Group meeting it was arranged and the Armonia of th

uning 45th flresuphout. All cols were gold or 37th latch third channel abundancement of 17th latch lat

The 6 mouth as been open the month of Newmbers, making the Movembers, and the Movembers, Adelaide Hills, ne was copied at good throughout the journey.

Les 5AX, at Gawler, has fired up a couple of those co-axial line osc. for 578 Me, working and he is valiantly enticing 5EF to drink of

AUSTRALIAN V.H.F. RECORDS TWO-WAY WORK

Date Miles ic. Stations Date Miles

VKSIL-W7ACS/KH6 26,847 5335

VKSIM-VR2CB 30,12/53 2405

VKSIM-VR2CB 30,12/53 2405

VKSQM/LZ-VK9DB 2211

144 VK3GM/3-VK7LZ/PF 9/3/52 317

188 VK3AFJ/3-VK3AAF/3 21/3/54 63.6

VK3AW-VK3AKE 11/12/49 63.6 VK3ANW-VK3XA 18/2/50

It is in the interests of all v.h.f. enthusiasts to notify F.E. through Divisions, if you can better the above figures. Please give exact details of both stations' locations for checking, when submitting your records.

the exhibitating waters. A couple of 6 st. and 11 seems to be a toou up whether the 27 and 11 seems to be a toou up whether the 27 and 11 seems to be a toou up whether the 27 st. and 11 seems to be a few converse with which he had to be a few converse with which he had to be a few converse with the seems to be seen to be seen the seems to be seen to be

99 Mr.: Our 'dol faithful' v.M. band duly provided a partie of DX opening during Mr. provided a partie of DX opening Mr. provided a partie of the DX opening Mr. provided parties of the D

new batch was Licold (ZAA from Kalasuneks new home to be the controlled and the proposition area. The controlled and the contro

(Continued on Page 13)



MADIOTRON
AMALGAMATED WIRELESS VALVE CO. PTY. LTD.

SHORT WAVE LISTENERS' SECTION'

Hells chapet Well things are lockine up. As "Are "rowed a lig margine, S.v.lis, have been "A.R." groved a lig margine, S.v.lis, have been use To hold thin section, we many prove to use To hold thin section, we many prove to an essential cog in the whole of Amateur Radio an essential cog in the whole of Amateur Radio and the section of the world. The section was the section of the world with the section of the world with the section of the world with the section of th

VK3 S.W.L. MEETING

The men the W.M. MERING.

The men the Club room, 191 Queen Street, at 2015 EST. Among those present were Len Poynter, President, and Secretary Gerard Lane minutes, we welcomed the following new members to the Group. They are Ian Woodman, which we have been to the Group. They are Ian Woodman welcome to the Group. They are Ian Woodman welcome to the Group chaps, and 1 do hope that you will receive lots of happy hours with

Meeting Dates for the first term of 1955 will be at 8 p.m. as follows: January—Tuesday, 25th; February—Tuesday, 23nd; March—Tues-day, 29th. Keep these dates free. All new faces will be welcomed. ill be welcomed.

Belleve that our friend, Dave Rankin, passed to limited A.O.C.P. with flying colours. Good tok Dave and hope to hear you on the air

S.W.L. CONTEST Open To All S.w.l's, Throughout VK

Discussion also took place regarding our first Contest, which is to be held from 1st January. The Contest will take the following form: Contest time will be between 0001 GMT, 1st January, 1955, and will close at 2359 GMT on · John Wilson, 37 Rayment St., Alphington, Vic.

39th March. Closing date for receipt of QSLs will be last mail to arrive on the day of 30th June. Results will be made available over 3WI on Sunday, 16th July at 1130 hours and will be published in "A.R." for the month of August.

BBBBBCC in A.R. for the month of August.

There will be four sections in which you fill be able to enter.

Section One.—Largest number of QSLs resived from Amateur Stations throughout the forld and dated between 1st January and 30th farch. 1056. rld and

March, 1985.

section Two.—Largest number of QSLs received on the Broadcast Short Wave bands

section There.—Largest number of QSLs received from Overseas Broadcast Stations opersection Four.—Largest number of QSLs received from all Sections combined in the form

of a grand total.

Awards will be given to the winners of each ection. QSLs may be in the form of cards or tters of verification. Jetters of verification.

The Centest is open to all S.w.l's. throughout Australia and overseas.

If you intend to enter, send your name and Jry to the Contest Committee (S.w.l. Group, W.I.A. Rooms, 191 Queen St., Melbourne, C.).

NEWS ON THE AMATEUR BANDS
THE MA THE THE MANY TH NEWS ON THE AMATEUR BANDS VR2CW, VK9FN, OA2A, OA OA3C. OA5G, HC2JR, IISM, IIYJ CTICL, CTIFY, OE13JM

GM8MM, GM9AA, FK8LL, KW6WB, CE3PV, CE2CC, VR3A, VR2CM, VR2AS, VR2AS. VR2BZ

VETRR, W5YLL, W5ZFC TI2RC, PY2CK, PY1MK XZ2OM, ZC5VR, KJ6AZ FU8AC, 457YL, VQ6LG VU2ES, VU2CY, K4AIM PY6RU. W5ZBL XZ2SO, W7VY WENT, WAY, THE STATE OF THE STA

BROADCAST SHORT WAVE BANDS

BREADORAST SHORT WAYE BANDS
From Gerrord Lane. Reported from U.S.A.
that KCRIE is operating on 620 Me. with an 82
days of the control of the

at strength S7-8. New Year is with us and J would like to take this opportunity to wish all s.w.l's. everywhere pleasant DX for 1955 and may you all be blessed with a very happy New Year. 73 to you all.—John Wilson.



DX ACTIVITY BY VK3AHH+

PROPAGATION REPORT

3.5 Me.: The only conditions observed on this bond during the month of November were regular openings to North America (0740-11302) and sporadic break-throughs from South Amer-ica around 0800-6800.

fee around 0800-08002.

7 Mo: The seasonal increase in noise was 7 Mo: The seasonal increase in noise was 10 Mo: The seasonal increase in noise was 10 Mo: The seasonal increase in noise was 10 Mo: The seasonal increase in noise was a seasonal increase in noise was a

dicany, around the control of the control of the conditions to Europe, Africa, and Seath and Asia Asia around 1100-1530. Communication o North America was possible during sporadic reack-through spread over the whole twenty-many control of the con

300c.

31 Mc. Conditions were changeable and preconsistently operating on this band reported
consistently operating on this band reported
consistently operating on this band reported
reported by the consistent of the consisten

NEWS AND NOTES

NEWS AND NOTES

While the months December and January are periods of restful summer holidays for most becopic, they make the property of the p

me of the front of science.

Welcome home to the 1954 Macquarie Island cam and particularly our fellow Hams: Chas KitaC, Gordon VKIGA, and Dave VKIDJ!

May 1955 be an especially good year for: KitDC and VKIZM on Macquarie Island and KKIRA and VKIAWI in Mawsen, MacRoberton Land, Antarctica. Good luck and bon

QTHS OF INTEREST:

OA2A—Box 51, Pacasmayo, Peru. CSAR—OARMA, APO 63, C/o. Postmaster, San Francisco, Calif., U.S.A. EADDE—Via EA2CA. † Hans J. Albrecht, 10 Belgravia Ave., Box Hill North, E.12, Vic.

North, E.12, Vic.
Call signs and prefixes worked.
z — zero time—G.M.T. Amateur Radio, January, 1955

ACTIVITIES

ACTIVITIES

3.5 Mc.: Chas IAC reports VKs, and here at SAHH III. 1 the log: W and LUJEZ.

7 Mc.: IAC sowred KLPIF. JAST VUIBCT.

7 Mc.: IAC sowred KLPIF. JAST VUIBCT.

7 Mc.: IAC sowred KLPIF. JAST VUIBCT.

7 Mc.: IAC SOWRED JAST SOWR

MONTH STATE OF THE TOTAL OF THE STATE OF THE

27-28 Me: Up in Queensland, 4EL worked KA2KS* KA2KC*, JA1CJ*, KH6AVH* and heard Ws. Good short skip conditions were reported by 2ALJ, 5HI and Jim Hunt. Rare QSLs arrived at 2AHH: VPIGG, ODSAB, TI2ACQ, MP4BAF, YV5EU, KG4AT, SWC OE13WD, HCILW, HCIMB, BERS195: JAIC (35 Mc.), JZOKF, VESDKD (35 Mc.), VQ4A-(7 Mc.), YI2AM, YO3RF, ZB2A, 3AHH: PJ2A

(7 Mc.).

Thanks to the Southern California DX Club and their Bulletin, W6NTR, and VKs 1AC, 1ZM, 2DL 2AHR, 2ALJ, 3HW, 3JA, 3KR, 3PA, 3TE, 3XB, 3XO, 3YT, 3ZA, 3ACN, 3ADI, 3AHC, 3AKR, 3ALQ, 3ANT, 3ANP, 4EL, 4RW, 5EN, 5HI, 5RK, 5WO, 7KM, 7XW, and s.w.l's BERS 185 and Jim Hunt. To you all, wherever you may be, a Happy and Prosperous New Year!

FIFTY MEGACYCLES & AROVE (Continued from Page 10)

TASMANIA 14 Me.: Although we have no new developments or ments of the second of t

the number of stations operating in Launceston to five.

T.E. who operated from Mt. Arthur recently, expects to make another visit to the mountain in the near future and there is also a possibility that Len will also be able to operate from Flinders Island. If time permits, Interstate stations will be advised of the titherary.

Pilloder uttend. It time forerast misses have been been do be to be made to be season haved to be made to be made to be made at 100 hours, the sizes have a construction of the been do be to be stations again came through in the evening good contacts were made. No other sig were heard until the evening of 28th, when and VK4 were contacted. Now with the ope of the Ross Hull Contest less than two h away, we are still waiting to hear another away, we are still waiting to hear another sig.

7XW is now operating on this band on 51.8

Mc. Although Cris is at present only using a
dipole antenna, he should be able to give some
Interstate stations a new Tasmanian contact.

—TLZ.

PREDICTION CHART FOR JAN., '55



- **★ GOLD PLATED CRYSTALS**
- **★ SILVER PLATED CRYSTALS**



offered by

BRIGHT STAR RADIO

46 EASTGATE ST., OAKLEIGH, S.E.12

UM 3387

LATEST MODERN EQUIPMENT

AMATEURS: BRIGHT STAR PLATED CRYSTALS WILL GIVE YOU GREATER ACTIVITY. PRICES FROM $\pounds 6/10/$ -. COMMERCIAL PRICES ON APPLICATION.

BRIGHT STAR CRYSTALS may be obtained from the following Interstate firms: Messrs. A. E. Harrold, 128 Charlotte St., Brisbane; Gerard & Goodman Ltd., 192-198 fundle St., Adeladice; A. G. Healing Ltd., 131 Pires Es, Adelaide; Alkins (W.A.) Ltd., 894 Hay St., Perth; Laurence & Hanson Electrical Pty. Ltd., 120 Collins St., Hobart; Collins Radio, 499 Lonsdale St., Melbourne; Prices Radio, 5-6 Angel Place, Sydney.

IF YOU WANT LONG LASTING RESULTS USE THE BEST **EDDYSTONE** THE CHOICE OF THE TRADE

TRANSMITTING CONDENSERS

Cat. No. 815 Single Section 60 pF., one end plate, 2 inch square 4 Lat. No. 816 Single Section 175 pF., one end plate, 2 inch square 4 Cat. No. 817 Single Section 1750 pF., one end plate, 2 inch square 4 Cat. No. 817 Single Section 1750 pF., two end plates, 25; inch square 2 Cat. No. 817 Single-States 60 x 50 pF., two end plates, 25; inch square Cat. No. 833 Split-States 100 x 100 pF., two end plates, 25; inch square Cat. No. 833 Split-States 100 x 100 pF., two end plates, 25; inch square Cat. No. 833 Split-States 100 x 100 pF., two end plates, 25; inch square No. 835 Single Section 200 pF., two end plates, 25; inch square 100 No. 835 Single Section 200 pF., two end plates, 25; inch square 100 No. 835 Single Section 200 pF., two end plates, 25; inch square 100 No. 835 Single Section 200 pF., two end plates, 25; inch square 100 No. 835 Single Section 200 pF., two end plates, 25; inch square 100 No. 835 Single Section 200 pF., two end plates, 25; inch square 100 No. 835 Single Section 200 pF., two end plates, 25; inch square 100 No. 835 Single Section 200 pF., two end plates, 25; inch square 100 No. 835 Single Section 200 pF., two end plates, 25; inch square 100 No. 835 Single Section 200 No. 835 No. 835



RECEIVING MICRODENSERS

CA. No. 60 Split-States 18 x 13 pF

CA. No. 10 Split-States 18 x 13 pF

CA. No. 10 Split-States 18 x 13 pF

CA. No. 10 Split-States 18 x 12 pF

CA. No. 10 Split-States 18 x 12 pF

CA. No. 10 Split-States 18 x 12 pF

CA. No. 10 Split-States 19 pF

CA

(Cat. No. 738 121/5% Sales Tax)

RECEIVING MINIATURE MICRODENSERS

 RECEIVING
 MINIATURE
 MICRODENSERS

 No. 531
 Butterfly 25 x 25 pF, 180 degrees rotation
 27/

 No. 552
 Split-Stator 25 x 25 pF, 180 degrees rotation
 28/

 No. 553
 Single Section 50 pB, 180 degrees rotation
 25/

WILLIAM WILL & CO. PTY. LTD.

8 BOURKE STREET — MELBOURNE, C.1
Phone: MU 2426 Established over 90 Years









FEDERAL, QSL, and



DIVISIONAL NOTES

FEDERAL.

SEASON'S GREETINGS As the old year closes, and the new year opens, Federal Council and Federal Executive wish to offer Season's Greetings to all who are connected with the world of Amateur Radio both within the Institute and without.

both within the Institute and without.

The New Year is a time of looking both ways.

The New Year is a time of looking both ways.

The New Year is a time of looking both ways.

Jeted ones. In this regard it is appropriate to express special thanks to that staunch band with the property of the propert

Much has been accomplished during 1954 to take the radio hobby even more interesting. I is with confidence that the Wireless Institute f Australia awaits the developments of 1953.

T.V.I. BOOKS

With increased activity in planning for t.v., it is also significant that Amateurs should plan in order to avoid giving interference to this

Federal Executive has just landed a shipment f Remmington Rand's latest book on t.i. his contains data invaluable in overcoming atterference and is a splendid addition to the mateur's technical library.

Those members desiring the latest edition are asked to send a letter to the Federal Secretary, enclosing 7d. in stamps, and a copy will be forwarded.

U.H.F.-V.H.F. DISTANCE RECORDS In another section of the Magazine will be food the first of the McLaulif, another before the McLaulif and the food the first of the McLaulif another formation is sent from Divisions, these will be amended. Members are requested to notify their Divisional Secretary of outstanding perheter divisional Secretary of outstanding perheter divisions of the McLaulif and the McLaulif an

FED. CONTEST COMMITTEE

TED. CONTEST COMMITTEE
The Cornect Committee and on the Early Marange of the Contest of the Contest of the Contest
and had the pleasure of unpacking the Rose
and had the pleasure of unpacking the Rose
and had the Contest of the Contest
and the Contest of the Contest
and the Contest
a

that allieds to a trophy.

Correspondence produced several letters of correspondence produced several letters of the state of the state

later. Certificates for all Contests in the past are now in the post and we would appreciate out of the contest of the contest

to be experted and we thrive on interest that the course of the previous Ross Bull Contest Trophy should hold the trophy for a period of two months each and then setum it to define the contest trophy should hold the trophy for a period of two months each and the setum it to expert the contest witners for two months. When this period for the four winners has been completed, witners have been completed to the contest witness that the contest witness are the contest of the contest. It is unfortunate that each of the four win-ners cannot hold it for the full twelve months but it is felt that they will understand the

difficulty and be only too pleased to co-operate with us. Incidentally, the four winners are SQR, SBC, 4KK and 6BO in that order. The trophy is to be photographed and then will be despatched immediately to Reg SQR who, in-cidentally, is a member of the Contest Com-

FEDERAL QSL BUREAU RAY JONES, VK3RJ, MANAGER

BAY JONES, VERBI, MANAGER
IIII Storre, WILLE, at Mawne, Ind. Breched
up and contract and to deep the property of the state of the state

song wire red at 133 feet.

Fred Sellens, ZL3MY, now 73 years old and
of course retired, spends much time chasing
contacts on 7 and 14 Mc. can
welcomes VI contacts and requests direct QSLs
to his new QTR at 4 Plymouth Street, Palmeration North.

raton North.

Treb. BERS195 commences two months furbugh from Xmas, 1954, and plans a motor tour
of VK2 and VK4 for most of the period. of VK2 and VK4 for most of the period.

Geoff Warner has been allotted the call sign
of VK2AVW, with QTH C/o. O.T.C. Radio
Receiving Centre. Bringelly, N.S.W. He is
settling in well, but has tons of work on hand,
so is giving Amateur Radio a miss for some

Frank Anear, VK9WZ (now F/Sgt., congrats) Frank Anear, VKSWZ (now F/Sgt, congrating, interest by knocked basek a southern posting, interest by the southern posting, interest by the southern posting for the southern posting the southern between the southern betw morning with eight stations taking part.

The J.A.R.L. advise of their decision is sout
to the Overreas Committee, J.A.R.L. Box 371.
Tokyo, accompanied by verifications by reastered post. After checking they will be rastered to the committee of the checking they will be
authorized bands may be used. C.v. or Phone
is permissible. Contacts must be with Japanese
antionals only and must date after July 30, 32.

nationals only and numer case are our 30, 30. The best of the framming and the properties of the properties of the properties indicate the number of International reply coupons that must accompany the award. It is hoped so that a recommendation will be sufficient for the award(s) and thus avoid the postage and an Asian DX award, details of which will be supplied at a later date.

LR.C.).
WA.J.A. (Worked All Japan Prefectures).—
Contact with all of the 46 prefectures (10 LR.C.)
J.C.C. (Japan Century Cities).—Contact with
100 different cities. There are 350 cities in
Japan (10 LR.C.).
The remaining four awards are for listeners.
(Details would be welcomed by s.w.l's.—Ed.)

-SILENT KEY-

It is with deep regret that we record the passing of:-Alex. W. Kelly, VK5XO-November, 1954.

W. A. MacGregor, VK9MC.

NEW SOUTH WALES

The November meating of the Wolsers in, estitute of Australia (N.5.W. Div.) was held at the usual venue on 26/11/54, and in the absence of the President, the chair was ably taken by other than the control of the president of the president of the president of the president of the control of ceived from EACH, 2FC, 2AWG, and 2ACD MONTH of the Communications as applied to the Sydney Communications as applied to the Sydney the Communications as applied to the Sydney that the progress made in this field here in Australia and to outline the methods of operation and the progress made in the field here in Australia and the continue that the progress of the Communication of the C

Low Drift Crystals

........

AMATEUR **BANDS**

ACCURACY 0.02% OF STATED FREQUENCY

3.5 Mc. and 7 Mc. Unmounted £2 0 Mounted £2 10

12.5 and 14 Mc. Fundamental Crystals, "Low Drift," Mounted only, £5.

Spot Frequency Crystals Prices on Application,

Regrinds £1 0 THESE PRICES DO NOT INCLUDE SALES TAX.

MAXWELL HOWDEN

15 CLAREMONT CRES. CANTERBURY, E.7. VICTORIA

"ACOS" CRYSTAL MICROPHONES and MICROPHONE INSERTS

A Complete Range For Every Purpose



£6/18/6

Housed in attractive plastic case, this Microphone is ideal for home recording and public address, etc. Response unexcelled for its size and price. The performance is not affected by vibration, shock or low frequency wind noise. Omni-directional frequency response substantially flat from 30 to 7000 c.p.s. Recommended load resistance not less than 1 megohm dependent on low frequency response. Can be supplied complete with switch and floor stand adaptor as required at a small extra cost.

This omni-directional Microphone is robust in MIC 22 This omn-directional Microphone is robust in construction, with a pleasing appearance. Vibration, shock or low frequency wind noise will not affect the performance. The low frequency cut-off is dependent on the load resistance. The cut-off is given by the quotation, F=80+R, where F=c.p.s., R=megohms. An adaptor (floor mounting) is available at low extra cost.

SPECIFICATION

Output level = -50 db ref. 1 volt/dyne/cm².
Output impedance—equivalent to approximately
0.002 uF. (0.8 megohm at 100 cycles). Frequency response—substantially flat from 40 to 6000 c.p.s.

Recommended load resistance—not less than 1 £9/18/6

This Microphone has been designed

for the high quality public address and home recording field. High sen-sitivity and flat characteristics are

obtained by a specially designed

affected by vibration, shock or low

frequency wind noise. Omni-directional frequency response substan-

tially flat from 30 to 7000 cns

acoustic filter. Housed in an attractive plastic case with an unexcelled response for its size and price. Un-

megohm, dependent on low frequency response.

Designed to meet even the most exacting requirements, this Microphone incorporates the world famous floating crystal sound cell construction. Its special characteristics are that its

fine performance is not affected by vibration or shock. The fidelity is not impaired by low frequency wind noise SPECIFICATION

Recommended load resistance-not less than 1 megohm

Output level -65 db ref. 1 volt/dyne/cm2. Frequency response—substantially flat from 30 c.p.s. to 10,000 c.p.s.

Directivity—non-directional. Size—2½" spherical diameter. Connector-Standard international 3-pin. £24/19/6

MIC 28

Designed to give freedom of movement, this Microphone is small and non-directional. Housed in a soft moulded rubber case, which gives protection against shock, it is provided with a pin at the rear of the case for pinning to the lapel.

SPECIFICATION Output level-approx. -55 db ref. 1 volt/ dyne/cm2

Recommended load resistance—5 megohms.

recommended load resistance—a megonms. Frequency response—level throughout the whole of the audible spectrum. Capacity—0.0015 uF. at 1000 c.p.s.
Impedance—100.000 ohms at 1000 c.p.s.
Cord—6 ft. shielded cable.
Size—1-9/16" wide x 2½" long x §" thick.

The MIC 35, undoubtedly the best value ever offered, is ideal for amateur transmitters, public address, etc. Housed in an attractive die-cast case. it features a high sensitivity and substantially flat characteristics. Provided with a built-in shunt resistance of

£2/15/- 2 megohms, it will, when connected to the grid of the input valve, give a substantially flat response from 50 to 5000 c.p.s. SPECIFICATION Output level: -55 db ref. 1 volt/dyne/cm2.

Cable—approx. 4 ft. of co-axial supplied.
Weight—6 ozs. unpacked, 7 ozs. packed.
Dimensions—microphone only 2½" x 2½" x ½"

MIC 33



£6/18/6 MICROPHONE

CRYSTAL MICROPHONE INSERTS

MICROPHONE

INSERTS

These inserts are available in varying sizes ranging from as small as 15/16" square to 1-13/16" round, with various thicknesses from 7/32" to 9/16". Suitable for every purpose such as hearing aids, public address, tape recording, amateur broadcasting, etc., they have responses from 2250 c.p.s. to 3500 c.p.s. at 5 db to 30 db. Insert can be supplied with or without 10 meg, resistor as required.

MIC 32 insert. £2/15/6; all others. £1/19/6.

EXCLUSIVE AGENTS: AMPLION (A'SIA) PTV. LTD. SYDNEY, AUSTRALIA

INCEPTS



(MIC 32 illustrated)

Page 16

iency in the methods of handling Aircraft Communication.
Following the lecture, a vote of thanks was tendered by Mr. Magee and the general appreciation of Mr. Rooks' efforts were shown in the usual manner—2FA.

SYDNEY SUBURBS

There is pleaty of activity on most bands been too sind. AMO is heard working the been too sind. AMO is heard working the been too sind. AMO is heard working the own to be the been too sind. AMO is heard working the own to the sind. AMO is the sind of the si

the same time decontaminating a v.C.

2.A.3 in between looking after the library
2.A.3 in the term of the library
2.A.3 in the term of the library
2.A.3 in the library
2.A.4 in the library
2.A.4 in the library
2.A.4 in the library
2.A.4 in

did catch something.

The following ness sent by 2NO, who is still the following ness sent by 2NO, who is still the following ness sent by 2NO, who is still the following the following ness sent the

on 144.55 Mc.

A letter to hand from ex-G&PO, Ted Iron-monger, Lieut. Comdr., tells of his now restricted Amsteur activity. Ted its serving on stretch and the serving on the serving of the serving on the serving of t

A newcomer in the Bondi area soon to take the fit is Kon Squires who has asseed the BA.O.C.P.; congrats old chap; he was alided on the cw. by Andy 2AX to whom his thanks go. Does anyone know if 2XIP is still interested was a familiar signal on the cw. DX short was a familiar signal on the cw. DX short from the Bondi area. Tom may be busy with plant connected with large sized c.r.o's.

plans connected with large sized c.r.o's.

Heard actively with 20 ms asals, along with
Heard actively with 20 ms asals, along with
me a visit occasionally, but mainly sizes to
the bars pomeign on 27 ms. There is conseted to the plant of the consequence of the conwho snow at smoke signals can never underwho snow at smoke signals can never underas an infant and he kick is still three, despite
consection. 3VA's serveded healton would be
as an infant and he kick is still three, despite
consection. 3VA's serveded healton would be
scaleton side for a new 2 ms beam in his
to 200, but does not appear to be interested
in 2 ms settivity.

VK2 MEMBERS VISIT BALLARAT, VIC. VK2 MEMBERS VISIT BALLARAT, YIC.

Hon. Secretary Harry 2ACI, Vice-President
Charlie JAWQ, President Jim 17C, and Vince
Ballarat. Leaving Sydney at 4.30 pm. on priday, they breakfasted with the 25U's at Albury,
120 pm. on Saturday, after going by a "short
cul" mavigated by ex-Vetorian Charlie JAWQ,
party to traverse the route since the days of
the very early explorers like Hume and Hovell,
both of the price of the price of the very early explorers like Hume and Hovell,
both of the price of the price of the very early explorers like Hume and Hovell,
both of the price of the price of the very early explorers like Hume and Hovell,
both of the price of the price of the very early explorers like Hume and Hovell,
both of the price of the price of the very early explorers like Hume and Hovell,
both of the price of the price of the very early explorers like Hume and Hovell,
both of the price of t 2ACH, see his opposite numbers in VEJ on DE, and Christ and Jian relevant Add friendships, and everyhoody became up to date the property of the control of keepings of the debates on the items was a could not be suprased. The hospitality to the could not be suprased. The hospitality to the How!" Westly-four hours, unfortunately, soon pass and it seemed to time before the N.S.W. way home, leaving John AddF, of Denlingain, to represent VGI till the end of the Correction.

to represent VAZ III the end of the Convention. Neville AACN spoke of the good roads to, and the besuites of, Bendigo, so the Chev, was Albury. At one stage, the President YIC man-aged to get a glance at 2AWQ's jealously west of Hay, in N.S.W., but was assured that "things were different" down in VK3 and we were "heading" for Albury alright.

were "heeding" for Albuny alright.

Next Benalls a herd developed in the ignition
Next Benalls a herd developed in the ignition
with the property of the property of the control of the co our next trip.

for him on our next trip.

Arrived home Monday at 11.30 a.m. for our a.m. start, thred and happy—well, some of a.m. start, thred and happy—well, some of a start, thred and happy—well and the start of the start of

SOUTH WESTERN ZONE

News it garden gain this month, due the service seems that month, due that the service seems that most seems that the service seems to see the service seems to seem the service seems to see the service seems to seem the service seems to see the service seems to seems to see the service seems to seem the seems to see the service seems to see the service seems to see the

HUNTER BRANCH

The November meeting of the Hunter, Branch The November meeting of the Hunter, Branch College on 12/11/54, Minchell Hunter, Branch College on 12/11/14/54, Minchell College on 12/11

hospital, but it OK again now."

At the Way Ney Field Day on 21/1/44, the search again extreed of a fair dame of the prices and again extreed of a fair dame of the prices and again extreed of a fair dame of the prices and again extreed of a fair dame of the prices and again extreed of a fair dame of the prices and again extreed of a fair dame of the prices and again the prices of the prices

College, the lecturer will be Angus Robert and the title of his lecture will be "S. Fundamental Aspects of Aerials." The lect for the February meeting is expected to "Plotting the Wave Patterns of Aerials."

VICTORIA

The meeting of the VKI Division, was held represented by Johnson and Johnson a

By the time this hits print, the festive season By the time this hits print, the festive season will be right on us. Possibly it is now a little late to wish everybody a Merry Xmas, but I'm in nice time to wish one and all a very Happy New Year. May it see an improvement in conditions on the bands and new distance records on the v.h.f. bands.

80 METRE TRANSMITTER HUNT

A SHERE TAXASHITER BUXY
An 59 nx Tr Hunt was hele on Sunday
afternoon. 4th November, in very pleasant
that the content by 100 502, was because it in
the content by 100 502, was because it in
the content by 100 502, was because it in
Creat cost past Mr. Wavesley, and was some
content of the content of the content of the
content of the content of the content of the
content of the content of the content of the
minutes to locate it. They were followed; how
were one of the content of the content
for the content of the content of the
following the content of the content
minutes to locate it.

The content of the content of the content
minutes to locate it.

The content of the content of the content
minutes to locate it.

The content of the content of the content
minutes to locate it.

The content of the content of the
minutes to locate it.

The content of the content of the
minutes to locate it.

The content of the content of the
minutes of the
minutes



There's no red tape attached to delivery when you rely on Gerard and Goodman. Your requirements of tapes and reels are readily available. Write, or call in to the radio section for prompt attention.

HANDY HINTS FOR TAPE RECORDING

TAPE

Write today and Gerard and Goodman Ltd. will send you a 16 page free booklet entitled "You don't have to be a recording expert."

Retail mail replies assured at:-

GERARD & GOODMAN LIMITED

192-196 RUNDLE STREET, ADELAIDE W 1541



Selected Items from our NEW RANGE of O TRANSFORMERS

* Driver Type ype 588—5 watts. rim.: 5,000 ohms S.E. or P.P. Sec.; 7,100 ohms per side. Response; 200-7,000 c.p.s. Type 545-10 watts. Prim.: 4,000 ohms S.E. Prim. to half Sec. ratio 1.6:1. Response: 50-10,000 c.p.s.

* Modulation Type Type M175-7-3-25 watte. Response: 200-7,000 c.p.s. Prim. and Sec. multi-

Ceramic terminals fitted with spark gap and closed steel case.

+ Hi-Fidelity-Output Type Plus or minus 1 db 30-15,000 c.p.s. Type 896—15 watts. Prim.: 10,000, 8,000 ohms P.P.

15, 12.5, 8, 3.7 and

ec.: 500, 250, 166, 125, and 100 ohms.

15, 12.5, 8, 3.7 and ec.: 500, 250, 166, 125 and 100 ohms.

* Special Hi-Fi Output Type Plus or minus 1 db 20-40,000 c.p.s.

Type 870—6 watts. Prim.: 10,000 ohms P.P. Sec.: 2 or 8 ohms (for Rola 120X) Type 871-12 watts. Prim.: 10,000 ohms P.P. Sec.: 2 or 8 ohms.

Type 872—12 watts. Prim.: 10,000 ohms P.P. Sec.: 3.7 or 15 ohms.

Manufactured by . . .

A & R ELECTRONIC EQUIPMENT CO. PTY. LTD. 378 ST. KILDA ROAD, MELBOURNE, VIC.

Details from these EXCLUSIVE A & R DISTRIBUTORS!

MELBOURNE & VIC.: J. H. Magrath & Co. Homecrafts Pty. Ltd. Radio Parts Pty. Ltd. Warburton Franki Ltd. TAUMANIA. omecrafts Pty. Ltd.,

SYDNEY - N.S.W.: United Radio Distribu-tors P/L, 175 Philip St. Homecrafts Pty. Ltd., 106 Clarence Street SOUTH AUST.: Gerard & Goodman Ltd. 196 Rundle St., Adelaide QUEENSLAND: A. E. Harrold, 123 Charlotte St., Bris WEST. AUST .: A. J. Wyle Pty. Ltd., 1011 Hay St., Perth ★ Ultra Linear—Output Type Full power and response all imped.3 Type 916—13 waits. Pr.: 8,500 ohms p.p. (with screen taps) Sec.: 916-8; 2 or 8 ohms; 916-15; 3.7 or 15 ohms.

NEW COLOUR

LOOK

Amateur Radio, January, 1955

hint and it was very much enjoyed by all. The majority of them ast down to a picnic tea together, sitting on their car seats on the grount, they formed a huge circle which have gone on for hours but a sharp microcould have gone on for hours but a sharp microcould shower of rain broke up the party about half past six; however all agreed they had a most midpathe outing and get together—Mrs. SLN.

NORTH EASTERN ZONE

NORTH EASTERN ZONE

Syd 2C1 is specialising in 2 mx antennae
and he asys beams get results. Alan 3U1 likes
commence works and he is reported to be on
commence when and he is reported to be on
the commence of the commence of the commence
to the commence of the commence of the commence
that is down in the list of good scores in
the R.D. Contest, along with Col 3WQ who
the R.D. Contest, along with Col 3WQ who
are along the contest of the commence of the commence
and per commence of the commence of the commence
and peter a.B.P. It would be correct to draw
attention here to Rex's GUIN effort on that
commence of the commence of the commence of the commence of the commence
of the commence of the comm

occasion, right up near the top, of George 320 is reported as been made interested for the ac. running past his property early november. Doug 31 saled for VK7 in the "Taroona" on 1st Nov., but is not in the top of the second o

got on to the 20 mc DX with wee beams of the control of the contro

EASTERN ZONE

EASTERN ZONE
The November meeting was held at Bairnsdale at the shack of Alan 3AFA. Films of interest were shown, but owing to two projector lamps and the shack of Alan 3AFA. Films of interest was a shadow of the shack of the shadow of the

of the rig and getting on the air?

Keth 388 and Graham 362 were amongst
those forfunate enough to visit Ballarat for
order to the state of the stat

QUEENSLAND

QUEENSLAND

November meeting was highlighed by a very convenient of the property of the proper stone, who ably supported Don 4GP with all his gear.

To those who know of any listener who may be interested in a listeners rection, it is pro-posed to hold a meeting during February with plans of setting up a section here in this Division.

OBITUARY

ALEX KELLY, VKSXO

ALEX MELLY, VEXED

AMBRER critics in NY, were sheeked to red this meth of the cubics and unitarity of it years. Headed in the cubics and unitarity of it years. Headed in South Testes Collection of the cubic state Radio and was first increase in the cubic state Radio and was first increase in the cubic state Radio and was first increase in the cubic state Radio and was first increase in the cubic state of the

The Brisbane gang are investigating the possibilities of holding a display in the coming industrial Fair next year, so would like all industrial Fair next year, so would like all to come along to the next meeting and see to come along to the next meeting and see what can be done regarding it. This also applies to any ideas for the holding of an annual convention apart from our annual gen-annual convention apart from our annual gen-

sensites to any ideas for the holding of an experimental control and the contr

what Christmas. Maybe he sun Deneves in "Santa."
Well chaps, on behalf of the Council, I take
Well chaps, on wishing you and yours all
the best for the year 1825, and hope it brings
you what you wish yourself.

SOUTH AUSTRALIA

SOUTH AUSTRALIA.

The monthly general meeting for November or a very representative gathering, and the sense of the sense of the product of a very representative gathering, and the product of the produ

Gordon, being a science master at the local property of the control of the contro

good a loser as you, when it is our turn.

Among the welcome visitors were the two
cond of lose \$10.0 m. If Hendridge [HR]],
good and the state of the state of the state of the
conditions of the state of the state of the
conditions of the state of the state of the
certain of the state of the state of the
certain of the state of the state of the
certain of the state of the state of the
certain of the

point of the toom and for all I have they we no to open up the recent we no to open up the recent was the control of the tending. Too was down from Remarks Alles Springs. Too was down from Remarks Alles Springs, and Let is now returned to the tending to the ten

species all his time literature to the activities of the Amsteries throughout the world. His same was synonymous with broadcasting on comparison to the control of the cont

WOOMERA RADIO CLUB

The monthly meeting of the Woomera Club was held to a capacity gathering of members, and after the susual business was disposed of, a discussion on the club's equipment was held, Arising from this discussion, it was decided to revert to the original circuitry of the twhich will facilitate its operation. The antenna one after the usual baginess was discoved of concincinc from the decision of the conposition of the control of the control of the concincinc from the decision of the control of the concincinc from the control of the control of the concincin of the control of the con
trol of the control of the control of the con
trol of the control of the control of the con
trol of the control of the control of the con
trol of the control of the control of the con
trol of the con
trol of the con

the control of the con
trol of the con
trol of the con

the control of the con
trol of the con
trol of the con

the con
trol of the con

the con
trol of the con
trol of the con
trol of the con

the con

the con

the con

the con

the con

the con
trol of the con

the con

the con

the con
trol of the con

the con

the con

the con
trol of the con

th

SOUTH EAST AREAS

SOUTH EAST AREAS

ACI is still bedding, but the shock is now above the property from the control of the still bedding the still be still b

Londy have stuck to that key in carnest to have Nice work OM. MRS is another one who has come of the Tol. Contest in the phone section, come of the Tol. Contest in the phone section, the work of the Tol. Contest in the phone section, the work of the Tol. Contest in the phone section, the work of the Tol. Contest in the phone section, the work of the Tol. Contest in the tol. Contest in the bown, as the VRS highest according to the bown, to say reaching of the better conditions the bown, to say reaching of the better conditions the bown to say reaching of the better conditions to be the tol. Contest in the bown of the table to the tol. Contest in the parameters, the tol. Contest is the contest of the tol. Contest in the contest of the tol. Contest in the parameters, the contest is appropriately and the parameters of the tol. Contest in any contest in the contest in contest in

recision for the smobbery on my part!
"Jamusry," and great will be the ecitebrations thereon, with the Edition transfers with the Edition transfers with the Edition transfers with the Edition transfers with the Edition of the Edition transfers with the Edition to the Edition to the Edition transfers with the Edition

feel may that if I can be arranged it will It is cuttomary for the various serbles at It is cuttomary for the various serbles at motion with some passing reference to the year and the with some passing reference to the year that and witty fournalists as the cety-YKS, who liant and witty fournalists as the cety-YKS, who liant and witty fournalists as the cety-YKS, who liant and witty fournalists as the cety-YKS, who have the president, I could for the cety-liant and witty fournalists as the cety-YKS, who have the president, I could for the cet-ter of the cety-cause all other seriles to blue their finners to cause all other seriles to blue their finners to cause all other seriles to blue their finners to cause all other seriles to blue their finners to cause all other seriles to blue their finners to cause all other seriles to blue their finners and a min of few words all right, I as many few words all right, I all right, I as sunder a barpy new year and wealth, health and the company of the cety of the country was their country was three year and wealth, health the company of the cety of the cety-tic of the cety-tic of the cety-tic of the cety-tom of the cety-tic of the cety-tom of the cety-the cety-the

in these days of free education!

I close these notes with another of my little of all. and will condense it somewhat because of all. and will condense it somewhat because the condense of th

WESTERN AUSTRALIA

WESTERN AUSTRALIA
At the November general meeting of the
Division those present listence with interest to
purpose of the Amsteur Advisory Committee.
Mr. Jewell, as a Radio Inspector of the Wirein this State, could naturally speak with
authority on this subject, and he clarified a
tion which may have been in doubt in the
past. A vote of thanks was moved by Rolo
608 in typical style and seconded by Skipper
608 in typical style and seconded by Skipper

Billion Types and the programme was provided by a lecture from Ted Pearce. ETP. estimated "Level Crossing Flashing Signals." Ted certainly knew his subject and with the aid of diagrams and apparatus, illustrated how well considered to the property of transport in general and the W.A.G.R. in

particular.

One of the Division's regular events held again this year was the Annual Plenic, conducted on Sunday. 21st November, at the South Perth joyed by those who were there, but the attendance was somewhat disappointing.

ETR returned safely from his holiday trip. Albany, and despite the fact that he had other

commitments, managed a tour of the shacks. A little mobile work on 50 Mc. was indulged in with 6 WG and 6 GC, but the gear in the car in the control of the

involving 250v. a.c. and 6MK?

28 Mc. provided a spot of interest towards
the end of November when 4EL broke through
with an S8-9 signal. Since then, 10 mx coninstance of the shacks. I can almost hear the
in some of the shacks. I can almost hear the
ided-in-the-wool 28 Mc. addicts pricking up
their ears! Still, it's about time the band began
to show signs of life.

to show signs of life.

Jee STD, of Bushury, has been doing quite and the state of the state of

of Annateur Television.

Judging by the DX column last month, £21,
Judging by the DX column last month, £22,
Judging last month,

ch Ron?

Well now's the time to wish everybody the Season's Greetings. Christmas has come and gone, but the New Year is still young, so let us hope that it will be a prosperous one, and bring lots of choice DX.

TASMANIA NORTH WESTERN ZONE

NORTH WESTERN ZONE
Three was a combined meeting of the zone
cock, where a good attendance viewed a piece
cock, where a good attendance viewed a piece
which is intended to be used as two-way radio
for the Devenport First Strated. The couple
for the Devenport First Strated. The couple
comport members of the WLA and will be
attended to the second of the strategy of the
station of about 44-50 waits crystal controlled
as stretching about the strategy with transcomporting the strategy of the strategy with transting and the strategy of the strategy with the strategy of the s It was resolved that members should organise search for radio interference with a view to aving it eliminated with the assistance of the .M.G. in order to clear the district ready for

P.M.G. in order to clear the district ready for the model of the district ready and the model in the solid com-members were in loopstal. Sum TUV has been Administrated the solid control of the solid con-significant of the solid control of the solid con-significant control of the solid control of the Americals have passed the A.G.P. namely Americals have passed the A.G.P. namely Rey Nichelis, who had previously passed the limited licensa and is now availing his new ing extensions to his beam with a view to add-ing elements for I and maybe 2 mg.

HAMADS

1/- per line, minimum 3/-. Advertisements under this heading will only be accepted from institute Members who desire to dispose of equipment which is their own perdispose of equipment which is their own perdispose of the month, and remittance must accompany advertisement. Calculation of cost is based on an average of six words a line. Dealer's advertisements not accepted in this column.

WANTED TO BUY: BC454 3-6 Mc. Command Revr. less valves and I.F.T's. F. Bail, 60 Shannon St., Box Hill, Vic., Phone: WX 2213.

RADIO RARGAINS



BARGAIN ELECTRIC GRAMO Units: English Motors in Electric Port-able Leatherette Carrying Cases. STANDARD 78 r.p.m. .. £5/19/6 STANDARD and MICROGROOVE

£7/19/6

combined SPEAKERS

Suitable for use with above (A) BOLA &I 57/9 (B) ROLA 12J 70/2 Postage Victoria 1/7 2/6 Postage Interstate 3/5

SPEAKER BOXES

(A) 8 inch Leatherette 45/1 (B) 12 inch Leatherette 57/11 (C) 8 inch Steel 27/6 (D) 12 inch Steel 42/-A \mathbf{R} Postage Vic. 2/6 2/6 3/3 Postage Inter. 3/5 5/2 7/2

Where postage rate is not shown, goods will be sent freight forward.

WRITE OR CALL FOR FREE RESISTOR CHART

THREE-SPEED RECORD

PLAYERS B.S.R. Type GU4 £12 Postage Victoria 4/-. Postage Interstate 10/-.

COLLARO TYPE 3-544 RECORD PLAYERS

£12/10/-Postage Victoria 4/-. Postage Interstate 10/-.

Above Units mounted in carrying case, ready for use £18/18/-

MICROPHONES (A) ZEPHYR 3XA 49/6 (B) ACOS Mic. 35 55/-(C) ACOS Lapel Mic. £5/19/6 (D) STEANE'S 409 Mic. £6/2/9 'n Post. Vic. 9.6



Post Inter



2/9

METER BARGAINS Fine Quality Meters, English Moving Coil 2", scale 200 ohms per volt:— 0-20 Volt .. 14/11 0-40 amp. 14/11 0-40 Volt .. 14/11 30-0-30 amp. 35/-0-3 RF amp. 7/11

WAFER SWITCHES Palec 10 Amps.

1 Bank 1 x 12 ... 10/- plus Tax 1 Bank 2 x 6 10/6 plus Tax 1 Bank 4 x 3 11/- plus Tax 3 Bank 4 x 3 21/6 plus Tax The above prices are plus 121% tax. Postage Victoria 1/3. Postage Interstate 1/3

each

EIMAC HI-VOLTAGE

100R Postage Victoria 1 Postage Interstate 3/5.

LOOP STICKS Q Plus

Out-performs all Loop Aerials

23/9 Postage Victoria 1/1. Postage Interstate 1/1.

USED SPEAKERS

6 inch type, 44 watts Complete with Transformer Guaranteed in perfect order

Postage Victoria 2/6. Postage Interstate 5/2.

"Radio and Hobbies"

PORTA-PLAYER KIT SET complete, £25

6K8G VALVES Brand New in Cartons

Postage Victoria 9d. Postage Interstate 9d.

BAND SPREAD UNIT 3 Short Wave Bands-31 Metres. 25 Metres, 19 Metres, in addition to Broadcast

£9/10/-Dial Glass to Match 14/10

Postage—Vic.: Unit 2/6, Glass 1/3. Postage—Int.: Unit 5/2, Glass 2/9.

MAIL ORDERS to-BOX 514J, G.P.O., MELBOURNE

LONSDALE STREET, MELBOURNE

FB 3711





WODEN MULTI-MATCH MODULATION TRANSFORMERS MADE IN ENGLAND!

Features-

- Potted type compound filled (vacuum impregnated).
- Universal application.
- Primary impedance range—2000 ohms to 18000 ohms.
- Secondary impedance range—200 ohms to 21000 ohms.
- Highest efficiency-lowest weight per watt.
- Easy to solder heavily silver plated tags.
- Above or below chassis wiring.
- Capacity—30 to 250 watts as under:

List No.		Watts RF Input			L.	ve	rali : W.	Siz	e H.		ght ozs.	Price incl. Sales Tax
UM1	30	60	120	Ma.	38"	x	31"	x	35"	5	8	£6/9/11
UM2	60	120	200	Ma.	51"	x	41"	x	51"	11	8	£9/17/2
UM3	120	240	250	Ma.	51"	x	51"	x	51"	14	8	£12/2/5
UM4	250	500	400	Ma.	101"	x	64"	x	84"	41	0	on application

For Minimum Hum-Maximum Efficiency



WODEN MICROPHONE TRANSFORMERS

Enclosed in a drawn heat-treated case of heavy gauge mu-metal, this type MT Microphone Transformer is suitable for use where MINIMUM HUM pick-up and MAXIMUM EFFICIENCY is required. It is designed for use with a moving coil microphone from 15-30 ohms impedance and on type MT101 the centre tap of the primary is connected to one side of the secondary and earth. One hole fixing allows rotation for minimum hum pick-up. Dimensions: I' dia. x 1½" long. One hole fixing; 7/16" dia. hole. Type MT101 Ratio 50: 1 overall, Price & 37/46' includ. Sales Tax.

Available from selected wholesale houses in all States!

AUSTRALIAN FACTORY REPRESENTATIVES: R. H. CUNNINGHAM PTY. LTD.

118 WATTLETREE ROAD, ARMADALE, S.E.3, VIC.
and 184 VICTORIA ROAD, DRUMMOYNE, N.S.W.